THE BUILDER

A Journal for the Architect & Constructor

JUNE 8, 1928 No. 4453

LEADING CONTENTS

ARTICLES	PAGE
Leader: Ancient History	969
Notes	970 & 971
General News	972
Competition News	972
Exhibition Notes	972
"The Builder" Debate	973
Correspondence	973 & 976
The Repair of Ancient Buildings: XXIII. By A. R. Powys, A.R.I.B.A.	974
Incorporation of Architects in Scotland	977
Notes on Illustrations	978
Law of Light—Degrees of Obstruction	991
Royal Institute of British Architects	992
Hospitals and Institutions Conference	993
Surveyors' Institution	994
Institution of Civil Engineers	995
Legal Questions We Have Been Asked: XXIII. By W. T. Creswell	996
Architects' and Builders' Inquiry Bureau	996
Everyday Science for Architects and Builders: XXII. By A. M. Giles	997
Valuations Under the Rating and Valuation Act, 1925: V.	998
New Buildings in London	999
Books	999
Rates of Wages in the Building Trade	1000
Contracts, Competitions	1001-1004
Proposed New Buildings and Other Works	1004 & 1005
Prices Current of Materials	1006
Scottish Builder	1007
Current Prices for Building Work in London	1008
Trade News	1009
Tenders	1009 & 1010

ILLUSTRATIONS

New Grosvenor House, Park-lane, W. Sir Edwin Lutyens, R.A., in association with Messrs. Wimperis, Simpson & Guthrie, Architects:—	
North Wing from Hyde Park	968
South Aspect from Hyde Park	979
The Restaurant	980
Reception Room and Grill Room	981
"The Cameo" Cinema Theatre, W. Mr. Robert Atkinson, F.R.I.B.A., Architect:—	
Detail of Doorway	970
Design for Panel	971
"The Journey by Night." Statuette Group. Miss M. Hawkins, Sculptor	971
Manchester Municipal College of Technology. Proposed Extension. First Premiated Design. Messrs. Bradshaw Gass & Hope, FF.R.I.B.A., Architects	978,982-984A
George Watson's Boys' College: Proposed New Secondary School. First Premiated Design. Mr. James B. Dunn, A.R.S.A., F.R.I.B.A., Architect	985-990

TWO WINNING COMPETITION RESULTS:

GEORGE WATSON'S BOYS' COLLEGE: PROPOSED NEW SECONDARY SCHOOL.

CITY OF MANCHESTER: PROPOSED EXTENSION OF THE MUNICIPAL COLLEGE OF TECHNOLOGY.

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86TH YEAR

The new Grosvenor House, Park Lane, W.: North Wing from Hyde Park.

SIR EDWIN LUTYENS, R.A., in association with MESSRS. WIMPERIS, SIMPSON AND GUTHRIE, Architects.

THE BUILDER

A JOURNAL FOR THE ARCHITECT AND CONSTRUCTOR

WITH WHICH IS INCORPORATED "THE BRITISH ARCHITECT."

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ANCIENT HISTORY

IT is now ancient history that the Architects' Registration Bill was "counted out" in Parliament. Whether this was the result of apathy, carelessness or ignorance, will never be known, but no doubt many guesses will be made. We can sympathise with the bitter cry of those who had this measure at heart. They denounce the indifference of politicians to what they regard as vital things, in contrast to the waste of time spent upon the programme of the hustings. It is probably true that it is a monumental piece of folly on the part of politicians to believe that they, for instance, can alter—except for the worse—the economic fabric of industrialism. Nevertheless, though an overwhelming case could be made out that they are discussing a subject that is vital, it seems to us that architects are doing their cause no service in making comparisons of this sort. To weigh it in the balance against other things is merely to invite a humorous rather than a serious treatment of the question.

The apathy of politicians is merely indicative of the apathy of the populace towards a disease that it has not diagnosed, and a suggested remedy that had neither meaning nor support. There are other contributory factors, undoubtedly, but it is not evident that the fate of this measure has caused any consternation in the country; the public is not aware that it has been suffering from something that required legislative treatment. If it has regarded the measure purely as a professional move, it has seen the game played out on those terms and lost. As a wide generalisation this is probably fairly near the mark. There was really not sufficient unanimity amongst architects, and there was also the open hostility from those who felt that their barriers had been encroached upon. The line of demarcation—a word familiar to trades unions—was not clearly defined; indeed, the attitude of trade unionism was evident throughout the discussions in committee. Compromise in these matters inevitably leads away from what should be the main issue—the common good of the community—and it seemed to us that some of the concessions given in this measure offered little hope of protection either for the community or the architect. It is better that a measure should be killed than that it should prove hopelessly ineffective in practice.

It is, of course, a platitude to say that no effective measure can be translated into reasonable legislation without general agreement within the profession. It has become generally recognised that a profession in protecting itself against unqualified practitioners is acting in the public interest. In justice to those architects who disagreed with the measure it must be stated that they were thinking of architecture and the public interest as apart from professional interest. They do not accept the broad principle that the public should have some warranty of the competence of an architect, or, in short, of "anyone who builds." There should be no legal distinction, they say, between the qualified and the unqualified—in fact, these words applied to the art of building are not accepted in their theoretical or academical senses. There is, therefore, no clear case made out for the protection of the public or the architect. Amidst a confusion of issues we are no nearer to-day to the real issue, and it is still mere guesswork to hazard an opinion upon whether the public would be willing to follow the lead of a united profession.

There is one argument applied to this measure in Parliament that, in certain respects, touches a rather low level of reasoning. No course of training, no stringency of examination, they say, can assure us that the registered architect will construct works of beauty. They go on to say that the world contains some very "painful" buildings designed by men whose professional competence was of the highest. This, in brief, is the argument that there should be no legal distinction between the qualified and the unqualified man. It is a double-barrelled argument, since it applies to architecture in particular, and every other profession in general. It raises the question whether architecture is a profession or an art—a vulnerable point of attack that cannot be dealt with at length here. From this question proceeds the corollary, that nothing which Parliament can do will increase the amount of artistic genius in the profession.

Leaving aside this development for the moment, something must be said about the fallibility of the qualified practitioner in any profession. So far as we know, the medical profession lays no claim to infallibility, while the legal profession may be said to provide a lucrative supply of doubtful points for barristers. Nevertheless, it would be rank stupidity on the part of anyone to argue that the progress of civilisation has not been advanced by those who have been given the right to claim special skill in their vocations. Where infallibility can be claimed by no one, we eliminate the greater danger by making a distinction—even if it is arbitrary—between the fallibility of the qualified and the unqualified.

There is an evident danger in separating, even for argument's sake, the status of the artist from other qualifications that may or may not require legal protection. If, for instance, we say that the dread enemy of civilisation is the prevalence of ugliness in housing, we do not intend to convey that it is simply a question of appearances plus technical efficiency. Efficiency in the absolute sense in architecture means to us a great deal more than functional planning and mechanical efficiency in the parts and in the whole. Architecture includes these qualities and many more. Even it we accepted the popular opinion that the architect can design a "nicer looking" building, the architect has still to convince the public that professional knowledge can be superior to, or even the equal of, practical knowledge. In the art of building it is the practical man—the builder—who claims the public attention. It is customary, we notice, for plumbers to describe themselves as "practical," and we often wonder what their trade would have been without the theoretical knowledge of the medical profession in sanitation, and the application of the scientific mind to the essentials of the plumber's craft. On the question of specialised knowledge involving legal protection, it may take the public a long time to make up its mind that architects possess this knowledge. Architects themselves are not convinced, or at least many of them assess its value at something less than the freedom which belongs exclusively to the artist. Fear, not the quest of beauty, may settle the problem in the future. Only fear that may have been vague convinced the public that the extracting of teeth required something more than a strong wrist.

Meantime the public is not seeking protection, and if it were, architects are not convinced they could give it. There is no need, therefore, to lament the death of a legislative measure unwanted by the public and not wholly sponsored by architects. As we see it, the onus of proof lies with the architectural profession, and unanimity is essential if the support of the public is to be assured. We repeat that the æsthetic conception of architecture requires much further discussion, and arising out of it, it might be found that the fight against ugliness would be the strongest weapon in the architect's armoury. On this subject, at least, common ground might be found.

NOTES

The British Institute in Paris.

THE Royal Institute of British Architects have decided to follow the good example set by the Universities of Oxford, Cambridge, London, Sheffield, Leeds, Manchester, Liverpool, Durham, Edinburgh, Glasgow, Wales, Dublin and Belfast, and to support with an annual subscription the British Institute in Paris. The headquarters of the Institute is at 6, rue de la Sorbonne, and here architectural students who go to study at the Ecole des Beaux Arts will find a British Director, Mr. Stephen Ward, a spacious library, and a well-furnished club-room. They can also obtain there tutorial instruction in French. Before long it is hoped to build a College of Residence at the Cité Universitaire. The perspectives of this College, which has been designed by Mr. Edward Warren, are now on exhibition at the Royal Academy. (The work was illustrated in our New Year's issue.) The support of the R.I.B.A. for this Institute, of which Lord Crewe is President, shows wise forethought for the care of architectural students who go to France, and will ensure that such students are given a welcome and expert guidance on any questions that may arise.

Civil Engineers and Architects.

LAST Sunday was the centenary of the incorporation by Royal Charter of the Institution of Civil Engineers; and we have pleasure in recording our hearty congratulations to the Institution and its members. A daily contemporary, referring to the occasion, attributes the origin of the Institution largely to the influence of a remarkable paper read by Henry Robinson Palmer at a meeting of young engineers at Kendal's Coffee House in Fleet-street. Palmer's description of an engineer as "a mediator between the philosopher and the working mechanic" is apt and would apply equally well to an architect. In the matter of static science, engineers and architects meet upon common ground, dynamics being the peculiar province of engineers, while the æsthetic aspect of structural work is still the accredited work of architects. Why engineers should so often disregard it, is a question which remains for the future to solve.

The Preservation of Old Churches.

ARCHITECTS who are called in to advise on the preservation of old churches should bear in mind that there have now been established some 38 committees in various dioceses, whose object it is to protect ancient work, and to raise the standard of modern churches and internal fittings. The accumulated experience of a large number of people of varied training, concentrated on this question, is tending to develop clear lines of policy. Serious misgivings, for example, are felt by all who care for the beauty of English churches, at the continual flow of memorial tablets which threaten to cover church walls. The worst types of tablets are now being discouraged, and there has been a great advance in the quality of lettering. The Archdeacon of Wells has advised those in his diocese that, when a tablet is desired, every effort should be made to keep it quite small in size, and to this end all ornamentation should be avoided. The materials, too, should be carefully considered. Local stone or metal is very often the best. The Church authorities are impressing upon everyone concerned that in many cases "to insist on placing a tablet in an ancient church, even under modern conditions and restrictions, is a very selfish thing, as it is part of a cumulative disfigurement of a building."

The Art of Symbolism.

IT is not surprising that one who has studied the art of symbolism and has produced so many quaint and interesting designs of a symbolic nature, should want to know what special significance attaches to the nude in the symbolism of transport. Mr. C. F. A. Voysey is this seeker after knowledge, though he must know that nude women have been designed to do all sorts of impossible tasks, and that artists often rely for effect in their designs by bringing into them the appeal of the nude female form. In the letter we publish from Mr Voysey, he seems to think that in any symbolism of transport of bodies they need wrapping, but the addition of drapery, whilst it adds to the decorative possibilities, does not surely much affect the symbolism.

The "Cameo" Cinema Theatre, W.C.: Detail of Doorway.
MR. ROBERT ATKINSON, F.R.I.B.A., Architect.

Architectural Impressions.

LORD FURBER, in Mr. Arnold Bennett's latest novel, "The Strange Vanguard," provides us with an interesting and amusing character study of a modern millionaire. He visits St. Peter's, and, gazing round at the interior, he remarks to his friend: "I like this place. It's a good answer to the Coliseum. Nothing dogmatic about it. It's as impartial as a railway station. Haven't you got the feeling that if we went down some steps somewhere we should come to the trains of the Pennsylvania Railroad —say the Chicago Limited?"

The Tyranny of Style.

IN these observations Mr. Arnold Bennett has cleverly hit off certain points of view that will be readily appreciated by all students of architecture. The layman's impressions of architecture are invaluable, particularly if they do not coincide—as invariably they do not—with the professional or specialised point of view. Consequently, unlike Lord Furber, it is the impartiality of the classic style of architecture (no doubt many would dispute that it is impartial) that disappoints so many; they prefer an emotional architecture to one that is uniformly stylistic in manner. Quite likely it could be argued that all architecture is stylistic, and that, therefore, our choice really lies between one universal style and styles of various kinds.

R.A. EXHIBITION, 1928.

The Journey by Night. Statuette Group.

MISS MARJORIE HAWKINS, Sculptor.

Celibacy and Art. AT the moment there is an agitation in France against the maintenance of celibacy as a condition for the winning of the five annual "Prix de Rome" awards. The winners are entitled to study at Rome for three years at the expense of the French Government, and although, as the outcome of a recent concession, marriage is allowed to be contracted during that period, no married competitor may be awarded the prizes.

The Architect in Fiction. Two years ago—we read in the Press—a brilliant architect, in order to compete, secure a divorce from a charming wife, and when he failed to obtain the prize, shot himself. The less tragic case of a "temporary" divorce being obtained to enable the prize to be competed for, with remarriage after it was won, is also mentioned. Here, surely, we have all the makings of some thoroughly up-to-date novels. Hitherto the architect has got something less than justice from the novelist, who introduces the architect only that he may share in husbands' and wives' quarrels when they come to building houses.

Cause and Effect. THE theory submitted that marriage is an effective barrier to artistic achievement is really, in other words, the familiar warning concerning the rewards and penalties of art. Unfortunately, the precarious business of earning a living must be faced by the artist, but there is an obvious danger in accepting the fact that poverty must be the lot of the artist. In this connection we sometimes doubt the wisdom of those who advise the younger architects that if they are artists they will be poor. As a warning it seems to place one in an unfair position; as a philosophic statement of plain cause and effect it is sweeping and unsound. It can be too easily the complete answer of the inefficient.

A Mexican Cathedral. THE architectural wealth of Mexico is amazing. In almost every corner of the land fine churches, convents and cathedrals are to be found, dating, for the most part, from the three centuries of colonial rule, during which the country enjoyed a period of almost unparalleled peace and prosperity. The city of Puebla, which lies between Vera Cruz and the capital, possesses nearly fifty churches and convents, including a cathedral which ranks next to that of Mexico in size and importance. This building (see p. 972) was commenced about 1552, and like the cathedrals of Mexico and Guadalajara has a certain affinity with that of Granada and other churches in the south of Spain. The architect is unknown, but he probably belonged to the school of Diego de Siloe, who designed Granada Cathedral. The cathedral is constructed of a bluish-grey stone, while the sculptures are executed in a dazzling white marble. The bas-reliefs over the north and south doors of the façade are excellent. The north transept façade is an able composition, and is one of the best examples of the Renaissance in Mexico. There is a dome over the crossing which is decorated with green and yellow tiles. The interior enshrines art treasures of great value, including the magnificent stalls inlaid with ivory and an altarpiece in the east chapel by Montanez of Seville.

The Late C. E. Montague. THE recent death of Mr. C. E. Montague, who was for many years a brilliant leader-writer on the *Manchester Guardian*, recalls that it is not generally known that he was keenly interested in architecture. It is to be regretted that in his writings he seldom ventured into pure architectural criticism. He had a fine conception of architectural qualities and the sense of structure in architecture. His architectural analogies scattered through his writings seem to us to suggest at least one explanation of his superb handling of English prose.

Design for Panel, the "Cameo" Cinema Theatre, W.C.

MR. T. B. W. CHAMPNEYS, Designer; MR. ROBERT ATKINSON, F.R.I.B.A., Architect.

GENERAL NEWS

Change of Address.

Mr. H. G. B. Ridges, L.R.I.B.A., architect and surveyor, has removed from 85, Above Bar-street, to No. 2, Gibbs-road, Above Bar, Southampton. 'Phone: 2657.

Manchester Clerks of Works.

The Association would be glad to hear from anyone who would like to lecture to the members during the next session. Communications should be made to the Hon. Secretary, Manchester and District Clerks of Works and Building Foremen's Association, 9, Grange-street, Seedley, Manchester.

The Foundling Site, Bloomsbury.

The governors of the Great Ormond-street Hospital for Sick Children have received a report from Mr. E. Stanley Hall, F.R.I.B.A., 54, Bedford-square, W.C., upon the proposal to remove the hospital to the site of the old Foundling Hospital. It is proposed to use the portion of the site at present occupied by the existing buildings and to preserve the forecourt as an open space.

The Architecture Club: Fourteenth Dinner.

The Fourteenth Dinner of the Architecture Club will be held on Thursday, June 14, at the Savoy Hotel, at 7.15 for 7.30 p.m. Major Sir Philip Sassoon, Bart., M.P., Sir Reginald Blomfield, R.A., and Mr. Austin Reed have kindly consented to address the Club on the subject of "The New Regent Street and the Future Development of London." Members are asked to advise the Secretary at an early date of their intention to be present.

The Surveyors' Institution: New President.

Mr. Charles B. Fisher, C.B.E., of Market Harborough, has been elected President of the Surveyors' Institution, which is celebrating its Diamond Jubilee this month. Mr. Fisher was educated at Winchester and Oxford, and followed his father, the late Mr. Edward Knapp Fisher, in his old-established and widely extended business as land agent and surveyor. He has been a member of the Institution since 1883, and was elected to the Council in 1917. He had in 1914 held office as President of the Land Agents' Society.

The late Mr. Rhoderic Cameron, F.R.I.B.A.

The death has occurred at his residence, St. Ann's, Aberfeldy, of Mr. Rhoderic Cameron, F.R.I.B.A., architect and civil engineer. Born at the farm of Buntair, Glenurquhart, Inverness-shire, Mr. Cameron had his initial training in the office of the late Dr. Ross, LL.D., Inverness, and was afterwards for eight years chief assistant to the late Sir Rowand Anderson. He went to Aberfeldy for health reasons some thirty years ago, and entered into partnership with the late Mr. Bell, architect and civil engineer. He was responsible for many important works, including churches, schools, private residence, and other buildings.

Rustless Steel Bridges.

Mr. C. J. Brown, at the Engineers' Conference, forming part of the Charter Centenary Celebrations of the Institution of Civil Engineers, referring to materials for railway engineering, noted that steels of higher tensile strength than the ordinary structural mild steel were coming into demand for general bridge purposes, and pointed out that if rustless steel of adequate strength could be made available in the ordinary sections for bridge work at a suitable price, it would go far towards solving one of the most troublesome problems associated with the maintenance of steel-girder bridges. He emphasised the advantages of employing reinforced concrete for bridges where possible, and said that with the greatly superior quality of the Portland cement now obtainable the prospect of producing satisfactory railway sleepers of concrete was improving.

COMPETITION NEWS

George Watson's School: The New Buildings.

The Education Board of the Edinburgh Merchant Company have had before them the awards of the assessor in the competition for a design for the new George Watson's College to be erected at Colinton-road, Edinburgh. Mr. John Keppie, Glasgow, was the assessor, and the architect whose design has been selected is Mr. James B. Dunn, A.R.S.A., F.R.I.B.A., Edinburgh. The following five competitors have received premiums of 100 guineas each:—Mr. James A. Arnott, F.R.I.B.A., Edinburgh; Messrs. Reid and Forbes, Edinburgh; Mr. James S. Johnston, Leith; Mr. T. Aikman Swan, A.R.I.B.A., Edinburgh; and Messrs. Charles E. Tweedie and Son, Edinburgh. The estimated cost of the scheme is about £160,000.

Essay Competition on Public Works' Subjects.

The Organising Committee of the Public Works, Roads and Transport Congress and Exhibition have decided to offer the following prizes for papers which are submitted for discussion at the Congress to be held in November, 1929:—1st Prize—Gold Medal and 50 guineas; 2nd Prize—Silver Medal and 30 guineas; 3rd Prize—Bronze Medal and 15 guineas; with additional awards of 10 guineas each for the best paper in each congress section, excluding those sections to which the first, second and third prize papers are contributed. The competition is open without restriction of nationality.

The subject of each paper must be one which falls within the services covered by the congress—that is to say, highways and bridges, water supply, sewerage and sewage disposal, cleansing, gas, electricity, housing and town planning, tramways and light railways, agriculture (small holdings, land drainage, land reclamation and agricultural education), and local government organisation. Papers must be submitted not later than December 31, 1928.

Application for the rules of the competition must be made to the Hon. Secretary, Public Works, Roads and Transport Congress, 84, Eccleston-square, London, S.W.1, from whom more detailed information as regards the subjects for papers may also be obtained.

Competition for Concrete Houses.

In order to encourage the use of concrete for house construction and to engender a high ideal of design in concrete work, the British Portland Cement Association, Ltd., is offering awards for the best concrete houses erected during the current year. These awards are offered for work that has been actually designed and constructed, and so, apart from submitting the necessary particulars called for in the conditions set forth later, the competition will entail no extra work or expense on the part of the architect. The prize awards will be as follows:—To architects: 1st prize, £100; 2nd prize, £50. To builders: to the builder of the house awarded the 1st prize, £50; 2nd prize, £25. Mr. E. Guy Dawber, A.R.A., P.P.R.I.B.A., has agreed to act as assessor.

Houses must conform to the following requirements:—(1) Only cement of British manufacture shall have been specified and used, with the exception of white cement, which only may be used for obtaining special effects; (2) Concrete must be used for the roof of houses where a flat roof is called for.

The actual construction must be completed by the end of 1928 in order that the prizes may be awarded early in 1929. Architects who intend entering for this competition should apply for an entry form A, which must be returned on or before September 29, 1928. Full details are obtainable from the Secretary, 20, Dartmouth-street, S.W.1.

The Cathedral, Pueblo, Mexico (about 1552). (*See p. 971.*)

EXHIBITION NOTES

THE SENEFELDER EXHIBITION.

If we measure the results of the 18th annual exhibition of the Senefelder Club at the Twenty-One Gallery, Mill-street, Conduit-street, by the possibilities of the lithograph and the fine effects which have been achieved in this branch of art we must say it is very disappointing. To begin with, the subject-matter of the drawings is in nearly every case lacking in interest, and though the lack of interest in a subject seems often more than compensated by brilliance of technique, we do think those who produce this work should endeavour to begin their work with a good subject. The subjects open to the artist for fine lithographic treatment are endless, yet the best things shown are often those which have no especially uplifting vision such as the quite pleasant "Summer Night," by John Goodchild, or the good studies of horses, by John Nicolson; the St George's, Hanover-square, and the landscape by F. Foottet, leave one's imagination to work agreeably but do not carry one far. Two dainty drawings by P. M. Hallward, especially one, the "Calvary," have a tender charm of technique: united to some little dramatic force this would carry the artist far. Amongst figure subjects we have very capable work by Jas. Grant in "The Drawing Lesson," and others, and an excellent head of "An Australian Farmer," by J. C. L. Malpass. When we come to the New York print by Joseph Pennell we see what can be done by a real lithographic treatment when guided by a hand with the sense of telling pictorial treatment. There are some admirable prints by G. Spencer Payse.

MEETINGS

SATURDAY, *June* 9.

Institution of Municipal and County Engineers. Meeting at Wakefield. 2 p.m.

Institution of Municipal and County Engineers. North-Eastern District Meeting. At West Hartlepool. 10.30 a.m.

WEDNESDAY, *June* 13.

Essex Society of Architects. Professor C. H. Reilly on "Liverpool Cathedral." At the Albert Hall, Colchester. 6 p.m.

Royal Archæological Institute. Mr. G. F. Lawrence on "Antiquities from the Middle Thames." 5 p.m.

THURSDAY, *June* 14.

Architecture Club. Dinner and an Address on "New Regent-street and the Future Development of London." At the Savoy Hotel, W.C.2. 7.30 p.m.

TUESDAY-FRIDAY, *June* 12-15.

Surveyors' Institution. Diamond Jubilee Celebrations. (See last issue.)

"THE BUILDER" DEBATE

VI.—ARCHITECTURAL COMPETITIONS: THE SCHEME OR THE MAN?

SIR,—I can well understand the difficulty that "Negative" experiences in carrying on a debate where there appears to be such a narrow dividing line between the views of the principals. If we look deeper into the spirit of our letters, however, there is undoubtedly a wide difference in outlook between us. "Negative" appears to be unable to forget the aspect of "contest" in connection with the competition, so that the rules of conduct impose on his mind a proportion of undue importance. I am more concerned with the actual end—the production of a fine building, and am inclined to force myself through the difficulties that may appear insuperable.

I cannot help feeling that the success of a competitor is bound to be measured by the degree by which he can identify himself with the *interests* of the promoters, in the same way as he would identify them with those of his client. Now a client who intends to build has some idea as to what he intends to build. In some cases his ideas will be very definite, and in others very vague, and in all cases the architect aims at giving him something that will respond to his wishes and his needs. If the client gives him a schedule of accommodation, he will try and satisfy it; but he will not hesitate to tell him if he considers the accommodation inadequate or extravagant. If the client insists on his ill-advised wants, something may have to suffer. Now take the case of a business firm requiring premises of a certain type and accommodation. Suppose the architect had the business vision to advise that it would be economical to acquire additional property adjoining, to arrange the premises to their best advantage; would he hesitate to do so, or would his advice be resented, even if not followed? Or suppose he saw that the site was sufficient to afford his clients all they were likely to want in the way of accommodation, and more besides, would he hesitate to suggest planning a section to produce revenue in the way of rents?

Yet it is obvious that if the limits of site are taken to be quite definite, his hands are tied in the broadest aspect of the problem. Perhaps it would be fairer to say that his hands may be so tied. This is, however, a condition of competition, and it assumes that the assessor has seen all there is to see in the project in question.

Then again, the question often arises that a client considers that certain rooms in his house, or certain offices in his premises, should have a certain aspect, or be on such and such a floor. It remains for the architect to convince him, if such is the case, that other arrangements are more advisable. He may even see ways in which the smooth running of the shop or household is improved by the alteration he suggests. In a competition with cast iron rules, such things as these are absolutely precluded, and I really fail to see how full advantage can be taken of the many brains brought to bear upon the solution of a competition problem if the competitors are thus bound and gagged.

"Negative" has quite missed my meaning in his burlesque of what he imagines to be my way of running a competition. In all cases an architect approaches as nearly as possible to the expressed wishes of his client, and a free competition, such as I suggest, is not likely to be won by anyone so foolish as to submit a stock scheme that is not relevant to the problem in question. But if the assessor is concerned only with discovering the man who is likely to produce the finest building possible for the scheme in view, he will choose the one who has clearly explored all ways of meeting the declared wishes of the promoters, even though he has in the end had to put them on one side and suggest more imaginative ways of doing what is needed. Promoters regarded as clients are no more likely to have made themselves entirely clear at the first time of asking than are clients, so that it is extremely unlikely that the scheme of the man so chosen will be on the lines of the building that will be built. But to my mind that does not matter in the slightest, so long as the right man is found.

"Negative" suggests that by giving the competitors a free hand, it is almost impossible to avoid awarding the job to a piece of fine architecture that cannot be translated into fact. I think he is doing scant justice to architects and assessors alike, and I fail to see why a competent competitor should fail to arrive at a practical proposition without the aid of a policeman, or why a competent assessor should fail to see what is practical politics and what is not. The fact of the matter is that where definite rules are insisted on, the whole of the competitors may be committed to a search for the impossible, or more often the inadvisable.

The main difference in our arguments is that "Negative" believes that all assessors are as capable of foreseeing the contingencies of a problem as are the competitors. My argument is that although most assessors may be capable of visualising the ideal solution, the discovery of the latter is vastly more likely to be attained if all the brains brought to bear upon the solution are allowed to approach it from all angles.

We see, time and again, a set of competition drawings that are all more or less identical in arrangement, and a study of the conditions will show that it is because these were framed in such a way as to leave little scope for variation. Nothing will convince me that this is making use of the mass brainpower of the competitors. It is simply discovering the assistant most capable of interpreting correctly the sketches and instructions of a principal. And the principal is, of course, the assessor. Why hold a competition at all if this is to be the case?

"Negative" tabulates a list of conditions which he claims represents the only mandatory clauses in a set of conditions for today's competitions. As a frequent competitor, I only wish his lists were complete; but my experience of them is very different, and I think "Negative" will have to confess to more embarrassment than such a set as this would cause. But even with this meagre list I have some quarrel :—

(a) The design to be sent in by a certain date. This is, of course, inevitable if any order is to be maintained.

(b) It must give substantially the accommodation asked for. This means that if I knew of a way of running departments together economically I am not at liberty to suggest it.

(c) It must not exceed the limits of the site. This means that if I saw an extension of the site was possible and vastly to the advantage of the scheme I must not suggest it.

(d) It must not exceed the limits of cost. This means that if I see a way of increasing the cost and producing revenue that will more than pay for the increase I must not suggest it.

(e) The competitor must not disclose his identity or influence the decision. Granted.

Surely all this is perfectly reasonable. I agree that the wishes of the promoters should be clearly stated, and that any advice that the assessor has given them should be made known to the competitors, but if the competition is to be something more than a farce these things must be simply desirable elements and not constricting rules of procedure.

"Negative" has dealt very gently with me, but I wish he would endeavour to see that our outlooks are not so nearly identical as he believes them to be; in which case I might have a supporter in my campaign for freer competitions.

POSITIVE.

CORRESPONDENCE

Architectural Draughtsmanship.

SIR,—I find myself very much in sympathy with your leading article, in the current number of *The Builder*, on architectural draughtsmanship, but perhaps this statement is to be accounted of little importance, because I realise that current opinion reckons individuals advanced in years out of date as "past numbers." It would probably be a waste of space, and also hardly worth while, to recapitulate what I put forward on this subject in a paper which I wrote by request of the R.I.B.A. Council, and read at Conduit Street, on February 2, 1885.

It will be found published in Vol. 1 of the "New Series" of the Institute "Transactions," accompanied by a most beautifully produced series of examples never surpassed, and including examples of draughtsmanship by Charles Robert Cockerell, Edward Blore, Sir Charles Barry, Thomas Allom, Augustus Welby Pugin, Eugene Emmanuel Viollet le Duc, George Edmund Street, William Burges, John Ruskin, Laurance Hilliard (lent by Prof. Ruskin), Sir Ernest George, R. Norman Shaw, John Langham, W. S. Weatherley, Emmanuel Brune (Grand Prix de Rome, 1863), and R. Phené Spiers, besides a line drawing of mine.

Probably no lecture was ever better illustrated by the Institute, or accompanied by a more representative exhibition of about 150 specimens, as set out in the list published with the report. Besides the names given above, the following were represented in the collection referred to :—The Brothers Adam, George Aitchison, R. W. Billings, H. W. Brewer, Talbot Bury, Sir A. W. Callcott, John Carter, James Cave, Sir William Chambers, E. F. C. Clarke, Fredk. Cockerill, John Coney, J. S. Cotman, David Cox, F. C. Deshon, Benj. Ferry, R. Flitcroft, E. W. Godwin, George Hatfield, Axel H. Haig, Thomas Hardwick, Sir T. G. Jackson, R. J. Johnson (Newcastle), Inigo Jones, Prof. Lethaby, J. F. Lewis, Thos. Malton, Fred. Mackenzie, Joseph Nash, W. Eden Nesfield. J. B. Papworth, Samuel Prout, Augustus Pugin, T. M. Rooke, Raphael, A. Salvin, Sir Gilbert Scott, Sydney Smirke, James Stuart, Bruce Talbert, Sir James Thornhill, Alfred Waterhouse, Sir Christopher Wren, Sir M. Digby Wyatt, and Sir Jeffry Wyatville. What better show could be more worthy of the occasion? The contributors included H.M. Queen Victoria and the Duke of Devonshire.

I make no apology for giving these facts. They are more convincing than arguments, and bring me to observe as to the different ideals now prevailing, when it is thought so clever and up to date to disparage previous masters of the art of careful and exact delineation of architectural subjects. It is manifest that the Victorians, so frequently referred to with scorn, at least were loyal to tradition, and to their *alma mater*. The meagre attendances at Conduit Street nowadays show how slack the modernists are. To this Mr. P. Hopkins, the representative of the Licentiate members of the Institute, draws attention in the official "Journal" of May 26, and gives an analysis of the members present during January, February, March, and April, showing totals of 189 Fellows, 135 Associates, and 24 Licentiates present at nine meetings, according to the records given in "The Kalendar." On a "Field Night" like May 21, when Sir Reginald Blomfield and Professor Beresford Pite marshalled their forces, and debated the topical subject of "Modernism in Architecture," so dear to the cult, mostly detractors of fine draughtsmanship, and devoted to "cubism," only 38 Fellows, 39 Associates, and 9 Licentiates managed to turn up to represent 1,417 Fellows, 2,402 Associates, and 2,100 Licentiates. What a registration of vitality! Anyway, the majority keeps conspicuous by its absence.

MAURICE B. ADAMS.

(*Continued on page* 976.)

THE REPAIR OF ANCIENT BUILDINGS

By A. R. POWYS, A.R.I.B.A.

XXIII.—CEILINGS: COMMON DEFECTS.

ANCIENT plaster ceilings were often simply, and sometimes richly, decorated with modelled or stamped ornament. In Mr. Laurence Turner's book on "The Decorative Plaster Work of Great Britain" there is an account of the ways in which these ceilings were made in different periods. There is, therefore, no need to describe this here.

A plaster ceiling is laid on to laths which are nailed on to the underside of ceiling joists. Failure is usually due to one of three causes: (1) The rusting of the lathing nails; (2) the decay of the laths, or (3) the breaking of the plaster "key." The "key" is the plaster which was pressed between the laths when the first layer of plaster was applied, and which wraps itself over the laths making the plaster-work one piece with them. Of these causes the rusting of the nails is most common, the decay of the lath is not uncommon, but in old plaster the breaking of the key is almost unknown because hair of a very tough kind was used very generously, and also because the lime putty from which plaster was made used to be much more carefully slaked than it is to-day.

Propping an Old Ceiling.

As soon as a valuable ancient ceiling shows signs of falling, it should be propped from below and great care should be taken not to damage the moulded ribs or modelled enrichments. Support should be given to the plain surfaces. This may be done from planks, resting on upright and stayed props, laid an inch or two below all the projecting decoration. The immediate support beneath the ceiling should be in the nature of felt pads or strips on packing pieces from the planking.

Examination from Above.

When a ceiling is defective it should be examined from above, and as the backs of old ceilings are dustladen, the first operation is to clean away all dirt. This is tedious work if done by hand, because the back of a ceiling is by its nature very rough and because it is divided into so many compartments by the joists. Hand cleaning is best done with soft-haired brushes such as are used by joiners in their bench work. But better and quicker than either for this purpose is a vacuum cleaner. When the back of a ceiling is cleaned the causes and extent of failure can be fully estimated and the method of repair decided.

Methods of Repair.

It may sometimes be possible to hold a ceiling in position by countersunk disks screwed to the joists and to short new pieces fixed between them, as is described in the case of vertical pargeting. But the usual practice is to back the old lath and plaster with a reinforcement of new plaster strengthened with strips of canvas, the new work being fixed to the sides of the ceiling joists and to fillets of wood fixed between them.

Photo by F. H. Crossley.

FIG. 35—Hanborough Church, Oxon: The Screen Before Repair, in 1910.

It occurs to me that fine copper wire mesh might be used instead of canvas; it would have some advantages over that material, but I have never seen it used and cannot say that it would be successful. It is unnecessary to take down any part of an old ceiling to do this so long as it can be reached from the back. The most difficult ceilings to maintain are those heavily moulded and modelled ceilings of the seventeenth and the first half of the eighteenth centuries. It may be found necessary to cut these or parts of them into sections and lower these sections for repair on the floor. Sometimes the bracketting which supports a cornice or a cove has rotted and must be renewed. When accessible these members may be strengthened in position by screwing on to them reinforcing pieces. Occasionally a whole ceiling must be carefully taken down for some reason not closely connected with the repair or maintenance of the plaster-work itself, and when this is done the ceiling joists and bracketting should be renewed wherever durability is questioned; the plaster-work should then be gone over carefully and defects repaired before it is re-fixed in its original position. When a ceiling is taken down it is usually cut into manageable sections. It is, however, but seldom that an old ceiling cannot be repaired in position.

Renewal of Missing Features.

Some ceilings to be repaired have already suffered from the loss of ornamental features; in such cases the debated question of restoration or repair alone arises. All are agreed that it is better to err on the side of doing too little reproduction than too much. Plaster ornament can be cast from moulds taken from the remaining original work, or small patterns can be pressed on to the plaster while it is being laid on. The practice of reproduction in this way is held less reprehensible even by those who most strongly dislike "faked" or reproduced work than would be the renewal of work which depends for its beauty or interest on the personal touch of the original workman. The reason for this is that the new is reproduced in the same way and from the same models as was the old. It has, in fact, if it is well done, every quality of the old work except age itself. The reproduction of plaster decoration which was modelled in position by hand is, however, a much more doubtful practice.

I have found the cowhair sold for use in plaster to-day so poor as to be almost useless, and recommend the use of goat hair, which is both stronger and longer.

Joinery.

The repair of joinery is ruled by the same principles as control the repair of the larger timbers used in carpentry, but whereas in carpentry unseasoned timber may be used in some positions without harm to the work, in joinery all the wood used must be thoroughly seasoned. Again, in carpentry it is often fitting that the timbers should not be wrought, even when exposed to view; in joinery a high finish is as desirable in repair as in new work.

Wall Panelling.

Old panelling set against outside walls is particularly liable to rot, both from the action of fungus and from damp. In such positions it is first necessary to make sure that the wall is in a condition to withstand weather and the causes of damp removed so that it may remain dry. Usually when panelling has to be repaired it should be removed from the wall and repairs done on the bench. When this is done the opportunity should be taken to point or plaster the wall face covered by the panelling and to dress it with picric acid or other germ-killing preparation. And before the panelling is refixed provision for ventilation at its back should be made. It may be advisable also to paint the back of the panel-

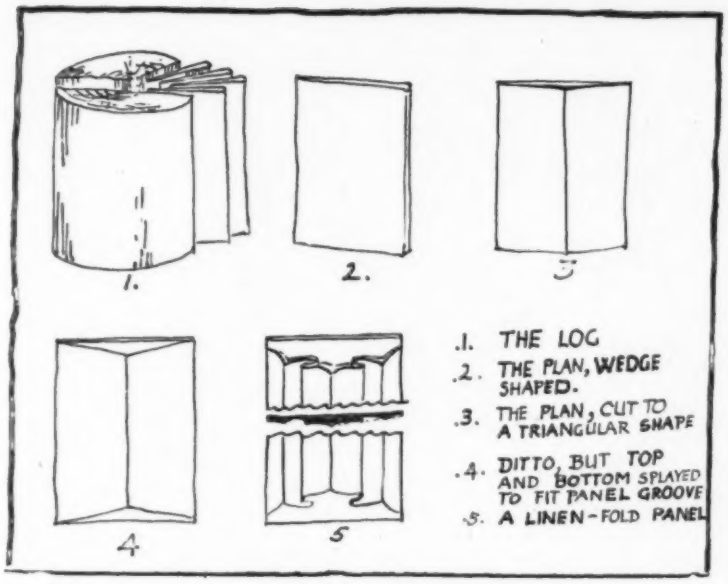


FIG. 36.

ling with two or three coats of good lead paint. Such parts of the panelling as have to be repaired or made new to complete the whole need not be so richly worked as the original. For instance, the Society for the Protection of Ancient Buildings would not recommend that new panels put in the place of others that are missing and which were originally decorated with linenfold pattern should be worked in that way. Again, where the styles and rails are richly moulded it may be well if the seemliness of the whole is unaffected that such new work as is necessary should be of a simpler kind.

With increasing age the archæological value of a work of art grows, whereas the value due to architectural form remains unaltered. Thus, a time comes when the restoration of missing parts, except on structural grounds, is undesirable. While it would be right to restore the missing fretwork of a late eighteenth-century architrave, the reproduction of the decorative pinnacled buttresses which were originally planted on a mediæval door or pulpit should not be allowed. In the case of church screenwork and like finely carved works of joinery this is particularly so. "Before and after" photographs of the screen at Hanborough Church, Oxfordshire, which Mr. Wm. Weir repaired, are reproduced here in illustration of this point (Figs. 35 and 37).

It sometimes happens that the face of a decaying panel is beautifully carved or painted. In such cases what remains of the valuable face should be set on a new backing of dry seasoned wood of the same kind. This, if proper precautions are taken, may be done by planing down the back of the old to an even surface, thus removing much rotten wood. The thinned panel or the remaining pieces may then be strengthened from the back with canvas glued on and then be set on a new panel. Sometimes the canvas strengthening may be dispensed with.

The Origin of Linenfold Panelling.

The late Mr. Sidney Barnsley suggested that linenfold panelling had its origin in the following manner. Although it does not bear directly on the subject of these articles, I should like to repeat here what he told me, as it is of considerable interest, and has not, I believe, been printed elsewhere. Everyone has been told that the beautiful display of silver grain in the panels of old oak was obtained because these panels were split in planes radiating from the centre of the tree. When this is done a series of wedge-shaped pieces of wood are made as shown on Fig. 36.

In preparing these pieces for panels it is necessary to plane all the edges thin so that they may fit into the grooves of the rails, styles and mountings.

This gives a panel with a slightly raised back as shown in the diagram (4), where the back or raised face of the panel is seen. Mr. Barnsley, who was unsurpassed as a carpenter, cabinet maker, and joiner, suggested that the craftsmen took pleasure in the shaped back, and set the raised backs to show in the place of the plane fronts. Further, he thought that to rib the raised panel (4) would suggest itself naturally to the mind of the joiner. From this it is but a step to the fully-developed linenfold (5).

The reference to the late Mr. Sidney Barnsley turns my mind to the consideration of his and Mr. Gimson's attitude to the question of "Restoration." If the ordinary layman, wholly ignorant of the use of tools, realised that scholarly men like Mr. Ernest Gimson and Mr. Barnsley, who had added to their scholarship a skill in craftsmanship equal to any of former days, and from a full knowledge of the subject so acquired, were keen adherents to the principles of the Society for the Protection of Ancient Buildings, refusing to restore missing mediæval features, he would surely hesitate before ordering that such attempts at "restoration" be made.

Paint on Panelling and Other Fittings.

But to return to the subject now under consideration. Much old joinery work was coloured. Colour, or traces of it, still sometimes remain intact. There are very few who will not agree that all traces of mediæval painting, whether plain, patterned, or figure work, should be preserved without renewal. But one comes across painted decoration as late as the eighteenth century—marbled work, graining, and painted flowers—which also deserve protection. It may be worth while to care for plain surface paint of that age where it by chance remains, but most of this has been redone many times since.

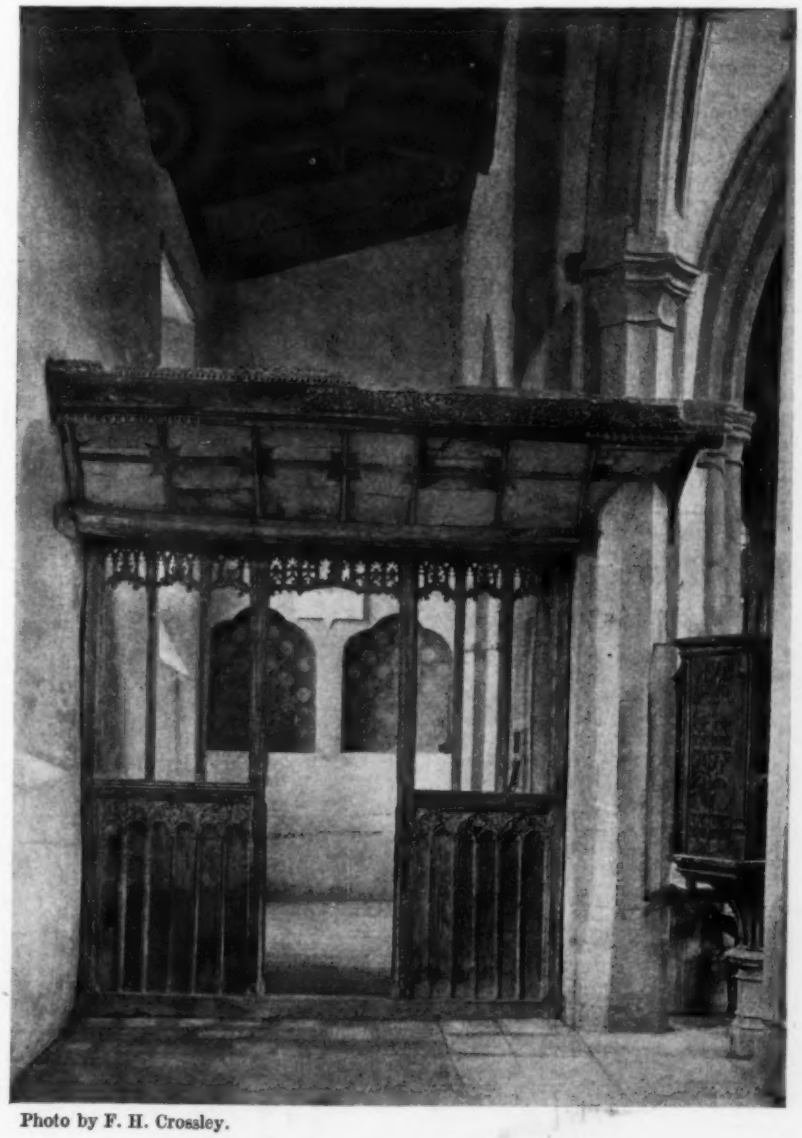


Photo by F. H. Crossley.

FIG. 37—Hanborough Church, Oxon :

The Screen After Repair by Mr. William Weir, in 1911.

English panelling of the fifteenth, sixteenth and early seventeenth centuries was not painted; it was usually left its natural colour, though there is evidence that it was sometimes artificially darkened. Where oak joinery retains its natural colour, a beautiful silver-grey, it is well not to stain it or give it other surface treatment than can be done with a dry brush, followed by the application of a little softened beeswax. Staining and oiling old oak, though a custom often followed to-day, is not to be recommended. In this respect, also, the treatment of joinery is like that of carpentry. Varnish, also, should not be used; this practice, once popular, has now almost disappeared.

In the eighteenth century it was a common practice to paint older panelling, just as the joinery made then was painted. To-day it is the fashion to remove the later paint, but this practice is by no means always wise. Paint does oak no harm, but rather otherwise, and it never lessens the historic interest of old panelling; often it makes a dark room lighter.

Further, with the removal of paint one is sometimes confronted with other difficulties. For instance, in a room which has been rearranged in the eighteenth century it may be that the newer modifications are of deal, and one is faced with the choice of substituting new work in the earlier manner and material for the later, or with an emphasised contrast between the periods. In such a case it seems well to accept the treatment given in the later period, paint and all. Panelling which has been painted again and again loses the keenness of the mouldings, but it acquires a mellowed softening which has a charm, if not a beauty, equally worth consideration.

The Removal of Paint and Varnish.

Varnish was commonly applied to old unpainted panelling and other fittings in the nineteenth century, and is now felt by almost everyone to be disagreeable. Mr. Noël Heaton has advised that it may be removed by using the following solvent:—Two parts of Tetrachlorethane and one part of Stearine. This forms a liquid which, brushed on the surface, softens the varnish after standing a few minutes, so that it can be rubbed off with a cloth or stiff brush, preferably dressed with a little very fine powder. On smooth surfaces a stripping knife could be used without ill-effect. Only as much of the woodwork as may be dealt with in half an hour should be treated, for the solvent evaporates and the varnish hardens again as it dries. Paint removers based on the above preparation may also be obtained.

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

(Continued from page 973.)

Transport and Symbolism.

Sir,—Though past 71, I find much I need to learn, so I look to you to teach me. All forms of transport, even that of our bodies, used to require wrapping. Tell me, please, why naked women are chosen to symbolise transport.

The feeling for design and pattern and the charming drawing shown by Mr. C. Rebel Stanton, in your issue of this date, are to me truly delightful and clever.

C. F. Annesley Voysey.

P.S.—The object of this letter is to encourage men to see the unseen behind the seen.

Architectural Competitions.

Sir,—Before entering any architectural competition I always write and ask the promoters—

1. What is the amount you will spend, and if the lowest tender from any builder for the completed work exceeds that sum, *what will be your action?*

2. What is the determinating—after the above—factor:—(*a*) Inside accommodation. (*b*) Outside appearance?

3. If there is an assessor, please say if he has been the architect for similar buildings actually erected. Will he, after considering the various plans and estimates submitted, consult you on *all* points before any final decision is made?

The replies always settle my action whether to proceed or to say "No, thank you"; and I have thereby saved "loss"—in every sense of the word—in some instances.

"Thos. d'Cay."

Charing Cross Bridge.

Sir,—Thanks are due to Mr. Horace Appelbee for his interesting ordnance datum details mentioned in The Builder last week. The rise to the proposed bridge suggested in my plan commenced from the entrance of Great Scotland Yard, about 600 ft. from the Embankment parapet. This gave the height of the roadway above the Embankment about 26 ft., leaving ample room for the trams to pass underneath.

But I am now venturing to submit another proposal which may meet with more general approval, as the main object is to endeavour to save the country a wasteful, unnecessarily enormous expenditure.

By the accompanying plan it is suggested the entire block of small houses, P.H. and Theatre on the east side of Craven Street should be purchased and a 100 ft. wide road constructed from the Strand to the Bridge.

This would give an exceedingly valuable building frontage to the Southern Railway Company's property, and quadruple the value of the houses on the western side of Craven Street, as these sites would then become one of the most valuable in London. Villiers Street, also, should be widened, and so increase the value of the railway company's frontage to that street.

It would be well if the R.I.B.A. could see their way to take this matter up.

Fredk. Nesbitt Kemp.

Clerks in the Sun.

Sir,—Those of your readers who earn their livelihood within office walls will be interested to know that a compromise has now been agreed upon in regard to the Offices Regulation Bill. The original Bill declared existing underground offices to be illegal. The new Bill provides that no underground offices shall be built in any new building at a greater depth than 5 ft. It is true that the law now proposed does fall short of actual practice in certain quarters to-day. The more wideawake modern employer accepts as an axiom what his father would have regarded as a revolution: even that one-time conservative institution the Bank of England is putting vita-glass in its new building to let the sun through; as, indeed, are Barclay's, the Midland Bank, and a host of others.

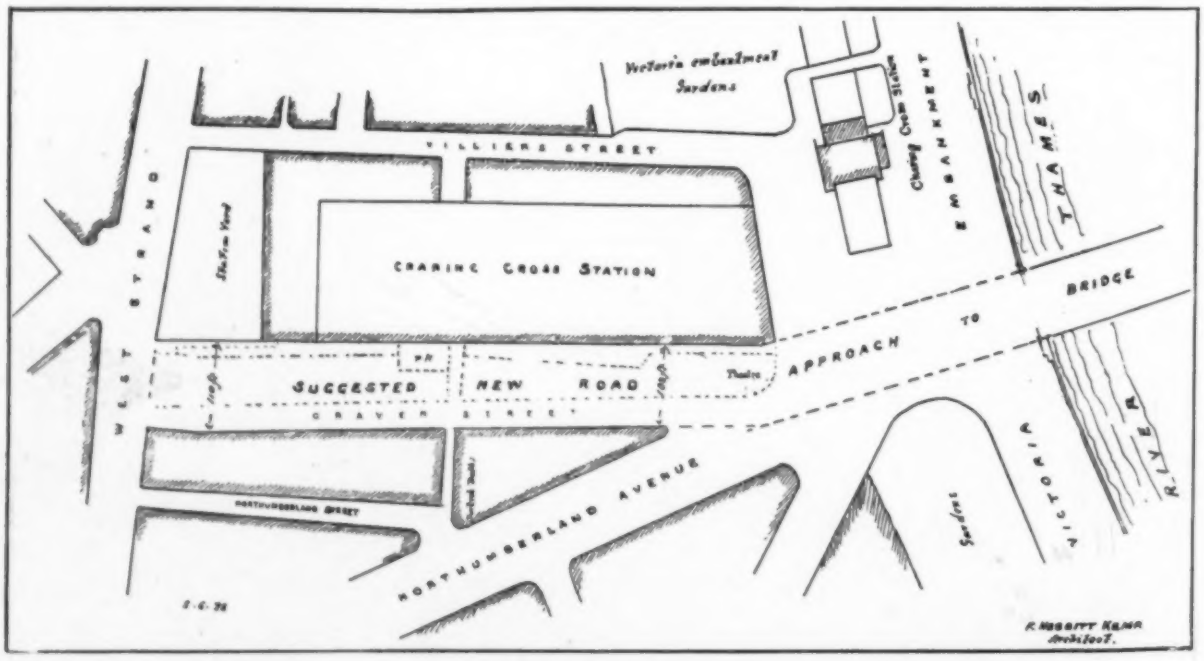
The wise employer now plans for fresh air and sunlight as a matter of course; but one does not legislate for the wise, and it is certainly satisfactory that this Bill of ours, backed at last by members of all parties, does make it compulsory for every office worker to have his or her definite supply of fresh air. Cramped minds inhabit cramped rooms.

[Miss] P. Friedman.

(Assn. of Women Clerks and Secretaries.)

R.I.B.A. London District Surveyors' Examination.

At the R.I.B.A. statutory examination qualifying for candidature as district surveyor in London, recently held, the following candidates were awarded certificates of competency to perform the duties of district surveyors:—P. S. Dixon, A.R.I.B.A., H. W Humphry, A.R.I.B.A., and T. H. Nunn.



(See letter above.)

THE INCORPORATION OF ARCHITECTS IN SCOTLAND

THERE was a large and representative attendance of members at the annual conference of the Incorporation of Architects in Scotland, held in the Incorporation Chambers at 15, Rutland Square, Edinburgh, on Friday, 1st June. The meeting at the outset was presided over by the retiring President—Mr. G. P. K. Young, F.R.I.B.A., Perth—who afterwards vacated the chair on the election and instalment of Sir Robert Lorimer, K.B.E., A.R.A., R.S.A., F.R.I.B.A., Edinburgh, as the new President for the ensuing year.

Mr. Young—moving the adoption of the annual report—made interesting reference to the Architects Registration Bill. This Bill (he observed) had met with a most unfortunate set-back in Parliament this session through the unexpected application of a recently adopted Standing Order of the House of Commons. It was unfortunate, but not fatal, and this Bill would undoubtedly be reintroduced into Parliament next session. It had been suggested in some quarters that the original Bill had been so weakened by concessions that it was now not worth having. That, however, was not so. They as architects must continue to fight for the principle of statutory protection of the profession; not as a trade union to benefit the material interests of those who were working for it to-day, but for power to direct the better training of those entering the profession; and therefore the advancement of their art and the greater protection of the community. It had never been the intention of the promoters of the Bill to interfere in the least degree with the rights and freedom of any practising architect, trained or untrained, but rather to endeavour that in future years all practising architects would be trained men. He (Mr. Young) appealed to the members of the Incorporation, therefore, to aid, with all their power, the progress of the Registration Bill through Parliament.

Continuing, the speaker also dealt with the designation of the members of the Incorporation, and pointed out that the official existing designation was "F. or A.I.Archts. (Scot.)." and that the Council had for some time been considering a much less cumbersome one. It was now his privilege to make a most important announcement from the chair, as contained in a letter from the Under Secretary of State for Scotland:—

> "His Majesty the King has been pleased to signify to Sir John Gilmour his approval of Sir John Gilmour's recommendation that the I.A.S. should be designated in future "The Royal Incorporation of Architects in Scotland."

The grant of permission to use this title, however, was contingent upon the grant of a supplementary charter altering the designation of the Incorporation by the Privy Council, and instructions had therefore been given for the preparation of a petition to the Privy Council to that effect. He thought all would agree, commented Mr. Young, that it was an honour of high distinction His Majesty had conferred upon the architects in Scotland through the Incorporation, and emphasised the great interest that the Royal Family took in the arts of the nation, and particularly in that section which His Royal Highness the Duke of York recently referred to in the words—"Of all the arts, the art of architecture is the one art of supreme importance to our national life."

Sir Robert Lorimer—on taking his place in the chair—said that there were one or two practical matters he would like to bring before the conference. Undoubtedly the most pressing architectural problem of the time was housing—the provision of new houses, and, still more important, the clearing of congested areas and the rebuilding or reconstruction of old properties. This latter was the greatest problem of all, and—as one wandered about the old town of Edinburgh or any other old town and saw the conditions existing—it looked almost insoluble. They as architects had all experienced the difficulties of reconstructing old buildings; bringing the interior up to modern requirements; and at the same time preserving the character of the exterior. Probably most of them had been abused for spoiling the character of old buildings in the process of reconstruction, but it must be admitted that the difficulties were always very great. Take, for instance, the average country cottage—the type that people grew sentimental about—with its whitewashed walls and thatched roofs. How were they to deal with such problem without altering the character of the exterior? They started at the door and put in a new floor a foot above the ground outside. That meant that the lintel of the door had to be raised; the wallhead had to be raised to allow of higher ceilings; the windows had to be increased in size; and the chimneys had to be rebuilt. What, therefore, was left of the old house? Very little; still, if the work was gone about in a sympathetic spirit, a good deal could be done to preserve the local character.

Dealing with the still more difficult problem of old properties, the speaker observed that, even where it was arranged to renew the whole interior and try to keep the façade, the problem was still difficult. The windows were generally too small, and the ceilings too low.

It was too complicated matter to be dealt with in his remarks that day, but there was no doubt that if the very old character of the Edinburgh streets was to be preserved some compromise with regard to such questions as heights of ceilings must be made. It was absurd to apply to the reconstruction of old houses the hard-and-fast rules applicable to new buildings, and the various authorities who had to pass plans for such reconstructions should show a little more elasticity in their methods. There was also another point with regard to housing to which he (Sir Robert) would like to refer. It might seem presumptuous on his part to offer any kind of criticism on the type and lay-out that was being so largely adopted, but he found that practically everyone to whom he had talked on the subject seemed to have come to the same conclusion—namely, that the prejudice against blocks of residential flats had been greatly overdone.

Everyone was agreed, went on the speaker, that nothing could be worse than the old deep and high type of back-to-back tenement house with no through ventilation, but he had never yet been able to discover that there was anything wrong with a really well-planned flat, and he was certain there were a great many people who would prefer them to the villa type of house. He well remembered that at a dinner given to Sir John Burnett in Glasgow in 1924, Sir Hugh Reid—a large employer of labour and a public-spirited man who had given much thought to the matter—in a most interesting speech raised the question as to whether houses of the garden city type were the one and only solution, or whether the provision of residential flats in larger and higher building, set well back from the main thoroughfares and in open spaces, would not be even more satisfactory. While everyone would admit, he said, that in the country the garden city was the ideal solution, there were many who believed that larger and higher isolated buildings, well placed on open sites, would be more satisfactory in large towns, as the buildings would not only be less costly in upkeep but would permit of provision for complete co-operative services, besides facilitating by concentration the very important question of transit. Take the large area that is being built over now on the south side of the railway at Saughton in the West End of Edinburgh. It appeared to him, said the lecturer, that much-needed variety might have been introduced into the lay-out of the scheme if there had been a considerable proportion of large blocks of flats, and that a much larger number of people could have been accommodated in the area in a perfectly healthy manner. If one went on building the little villa type of houses till the crack of doom, one would not solve the problem of clearing the slums, and it was in order to clear the slums and give the unfortunate man who was living with a family in a one-room house the possibility of leading a decent life that the whole housing movement was started in this country.

In conclusion, Sir Robert said he would like to mention one further point. They as architects were aware that a great effort was now being made to develop the supply of home timber, and he wanted to appeal to all architects to give home timber a fair chance. It had been contended that they could not get a continuity of home timber, and that where they wanted ordinary timber in constructional work it was not properly graded or properly seasoned, but before long, however, he hoped that they would find proper arrangements being made both with regard to grading and seasoning.

At the civic reception in the City Chambers, Bailie Hay (who presided in the absence through illness of Sir Alexander Stevenson) expressed the high appreciation of the value and importance of the work of the Incorporation in developing and training a class of architects who would maintain the high reputation of Edinburgh, as regards the pre-eminence of its architecture. Sir Robert Lorimer—in acknowledging these sentiments—said he was all for making Edinburgh more and more a centre in which the finest art work was produced. There was no doubt that there had been an advance in this direction in the last forty years, and that a good deal of work of this class was now produced in Edinburgh that brought grist to the Edinburgh mill. Many of them, however, felt that there was not as much sympathetic encouragement given to the artists in the various crafts as there might be, because people were so apt to imagine that—if they wanted something good—they must always go far afield to get it. He would not talk of architecture—though they had their own little grievances about people being imported from the south to do jobs that could be better done by men with knowledge of local methods and materials—and instead he would take their sister art of painting. In Edinburgh there was an Academy of the Arts, yet when there was a commission for a presentation portrait going they often went outside Scotland. Had the results always justified this unpatriotic action? Had the experiment always been a success? In conclusion, Sir Robert again thanked Bailie Hay and his fellow magistrates for their warm welcome, and he ended on the note on which he had begun: Encourage local products; give their arts a chance, and those arts would "deliver the goods."

Lord Salvesen—proposing the toast of the evening at the annual dinner of the Incorporation held in the North British Station Hotel—referred to the depth of knowledge necessary in an architect. He knew no other profession—outside the law—in which so much understanding of so many different kinds of materials was necessary. The oldest definition of architecture which he knew, written thousands of years ago, held good to-day; the main features of the work of a good architect were three—stability, utility, and beauty. If the architect did not fulfil all three, he was not an architect in the true sense of the word.

National Gallery: Loan of a Raphael.

The Madonna by Raphael, known as "The large Cowper Madonna," which hung till recently at Panshanger, has been lent to the National Gallery for six weeks by Sir Joseph Duveen, and is now on exhibition in Room XXVIII at Trafalgar-square.

ILLUSTRATIONS

Grosvenor House, Park-lane, W.

We illustrate this week the completed portion of Grosvenor House, Park-lane, W. The building has been designed to fill the growing demand for service flats, and meals may be served from the kitchens to any suites or rooms upon demand. A grill-room, restaurant and ballroom—open also to the public—are part of the scheme, for which Messrs. Wimperis, Simpson & Guthrie were the architects, Sir Edwin Lutyens, R.A., being responsible for the external elevations. The internal decoration was carried out by Grosvenor House, Ltd., and Messrs. George Chappelow & Sons. Messrs. Edcaster, Ltd., 147, Grosvenor-road, S.W.1, were the general contractors. The sub-contractors were:—Redpath, Brown, and Co., Ltd., steelwork; Caxton Floors, Ltd., patent floors; A. Grant and Sons, plumbing; J. F. Ebner, wood block flooring; Etchells, Congdon and Muir, Ltd., lifts; Marshall, Sons and Co., boilers; and Sturtevant Engineering Co., vacuum cleaning plant.

The Manchester College of Technology.

The important extensions to the present College buildings are almost wholly in the nature of providing adequate workshop and laboratory accommodation for the various departments connected with Lancashire industrial life. Full results of the Competition were given in our issue for May 25.

Messrs. Bradshaw Gass and Hope, FF.R.I.B.A., of Bolton, in their design, which was placed first in the competition, and is illustrated to-day, have arranged their plan so as to extend the present corridors and make effective inter-communication throughout the whole building. The central entrance and staircase from Whitworth-street, with lift equipment, gives direct access to the centre of the building from the principal thoroughfare. Entrance for goods with lift to all floors and large garage are also arranged. The design shows the full development of the site with the present levels of the floors maintained. It is so arranged as to give a central block in which there is space for future extension. In the present buildings the administrative offices will be retained, the new portion being devoted to the practical working accommodation for the various departments, and they are so planned as to give actual workshop conditions as far as possible. The mechanical and electrical engineering workshops, with the textile departments, including spinning, weaving, bleaching and dyeing, occupy the main portion of the lower ground floor, with research laboratories and lecture rooms over; top lighting is arranged over the greater part of this area. Ample provision is made for the mining and fuel departments as well as for chemistry, metallurgical and physics research laboratories. Municipal and sanitary engineering, and the building, printing and photographic departments occupy important positions. The great central block, with lighting on both sides, and arranged so as to be able to be used and divided up as required, gives about 16,000 square feet of nett floor space available for future extension, while the seventh floor provides space for a covered recreation ground of over 9,500 square feet, which could also be adapted for teaching purposes. The many divisions of each of the important sections of trade are all fully provided for and grouped together for effective working and easy supervision.

It is proposed, in the first instance, to spend £170,000, and the plan is so arranged that after the lower floors are constructed the building can be erected in sections, either vertical or horizontal, as may be thought desirable, each part being complete in itself, and the extensions can be done without interference with the use of the parts first erected.

George Watson's Boys' College.

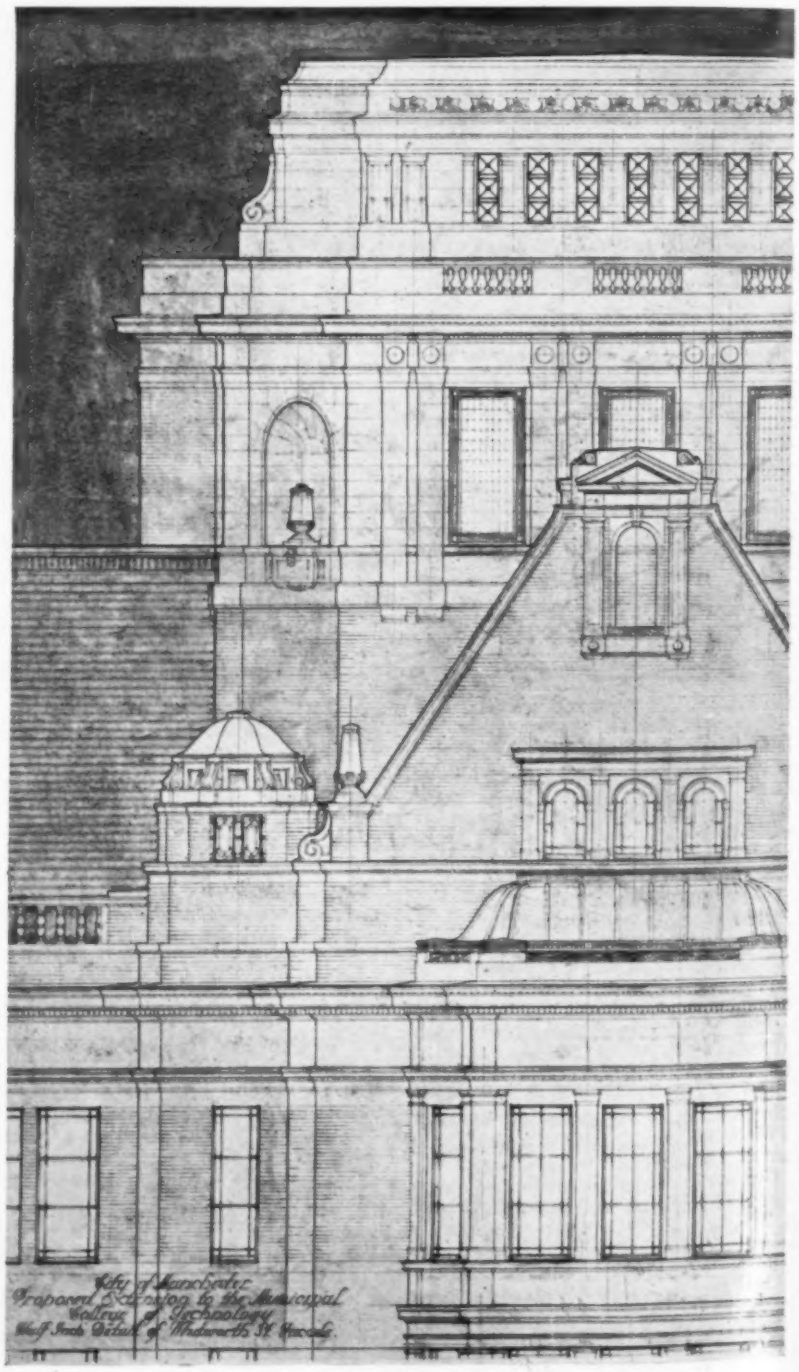
The results of this competition—won by Mr. James B. Dunn, A.R.S.A., F.R.I.B.A., of Edinburgh—are given on page 972. The winning design is planned on a simple and direct basis, and it is claimed for it that it achieves an economic, easily worked and supervised school, without any loss of dignity.

Provision is made for 36 classrooms, and these are planned in an unbroken line on two floors, with a south-east outlook down the slope of the playing-fields. The need for economy precluded the employment of extravagant ornament on the main front, and the elevations to Colinton-road have been kept plain and severe in character. The severity, however, is relieved by the treatment of the main entrance to the school, which consists of two Ionic columns supporting a modelled entablature and flanked by wings. The architect's report states that the simplicity of this elevation makes for dignity, and that it is in harmony with the traditions of George Watson's College and the architecture of Edinburgh.

The plans provide for a physical education department standing as a complete unit in itself, adjacent to the playing-fields and on the South Gillsland-road site.

Another feature of the design is the attention paid to the "traffic problems" of the school. Provision has been made for pupils entering the school via the cloakrooms with a minimum stage, there are all the necessary stores and retiring rooms. The buildings will include technical instruction departments and chemistry, physics, biology, and geography laboratories. Art rooms, dining-rooms with kitchen and offices under, an open-air exercise court, libraries, and a lecture theatre are other features, and the administrative department is grouped around the main entrance in a position which allows little or no interference during school hours.

The total cubical contents of the buildings on the plans is 1,954,376 cubic feet.


City of Manchester
Proposed Extension to the Municipal
College of Technology
West Front Detail of Whitworth St Facade

Manchester Municipal College of Technology, Proposed Extensions: First Premiated Design.

MESSRS. BRADSHAW GASS & HOPE, FF.R.I.B.A., Architects.

The new Grosvenor House, Park Lane, W.: South aspect from Hyde Park.

SIR EDWIN LUTYENS, R.A., in association with MESSRS. WIMPERIS, SIMPSON AND GUTHRIE, Architects.

The new Grosvenor House, Park Lane, W.: The Restaurant.

SIR EDWIN LUTYENS, R.A., in association with MESSRS. WIMPERIS, SIMPSON AND GUTHRIE, Architects.

THE GRILL ROOM.

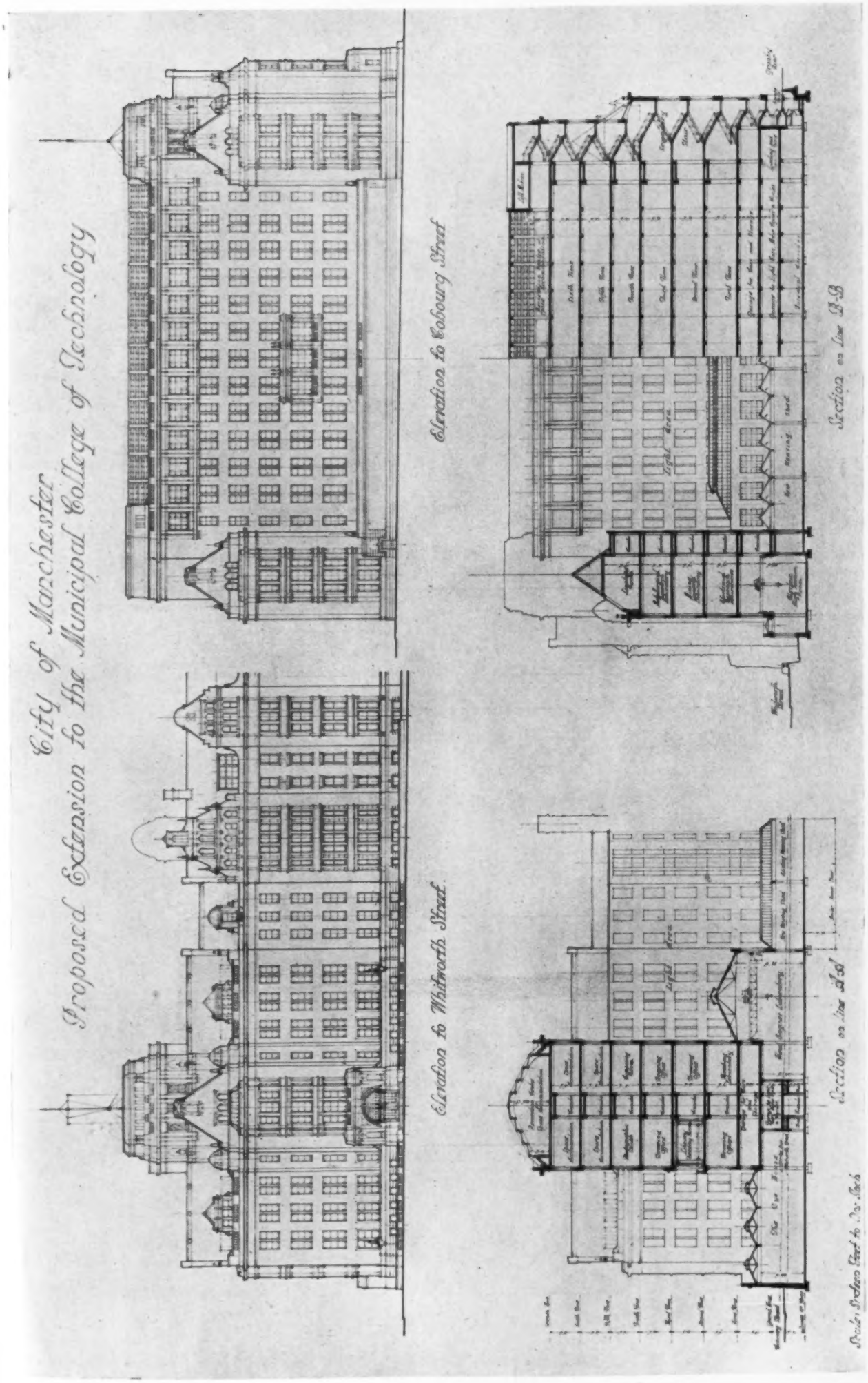
THE RECEPTION ROOM, ENTRANCE TO GRILL ROOM.

The new Grosvenor House, Park Lane, W.

SIR EDWIN LUTYENS, R.A., in association with MESSRS. WIMPERIS, SIMPSON AND GUTHRIE, Architects.

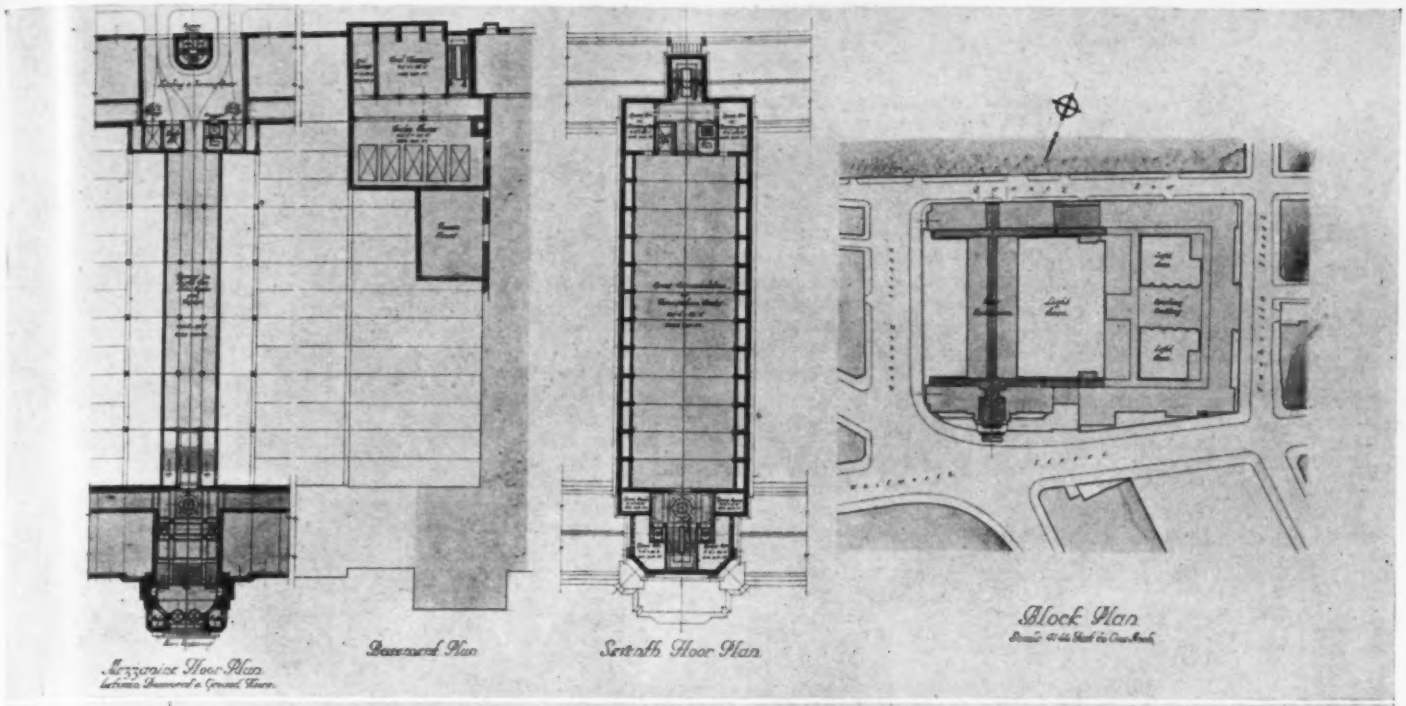
Manchester Municipal College of Technology, Proposed Extensions: First Premiated Design.

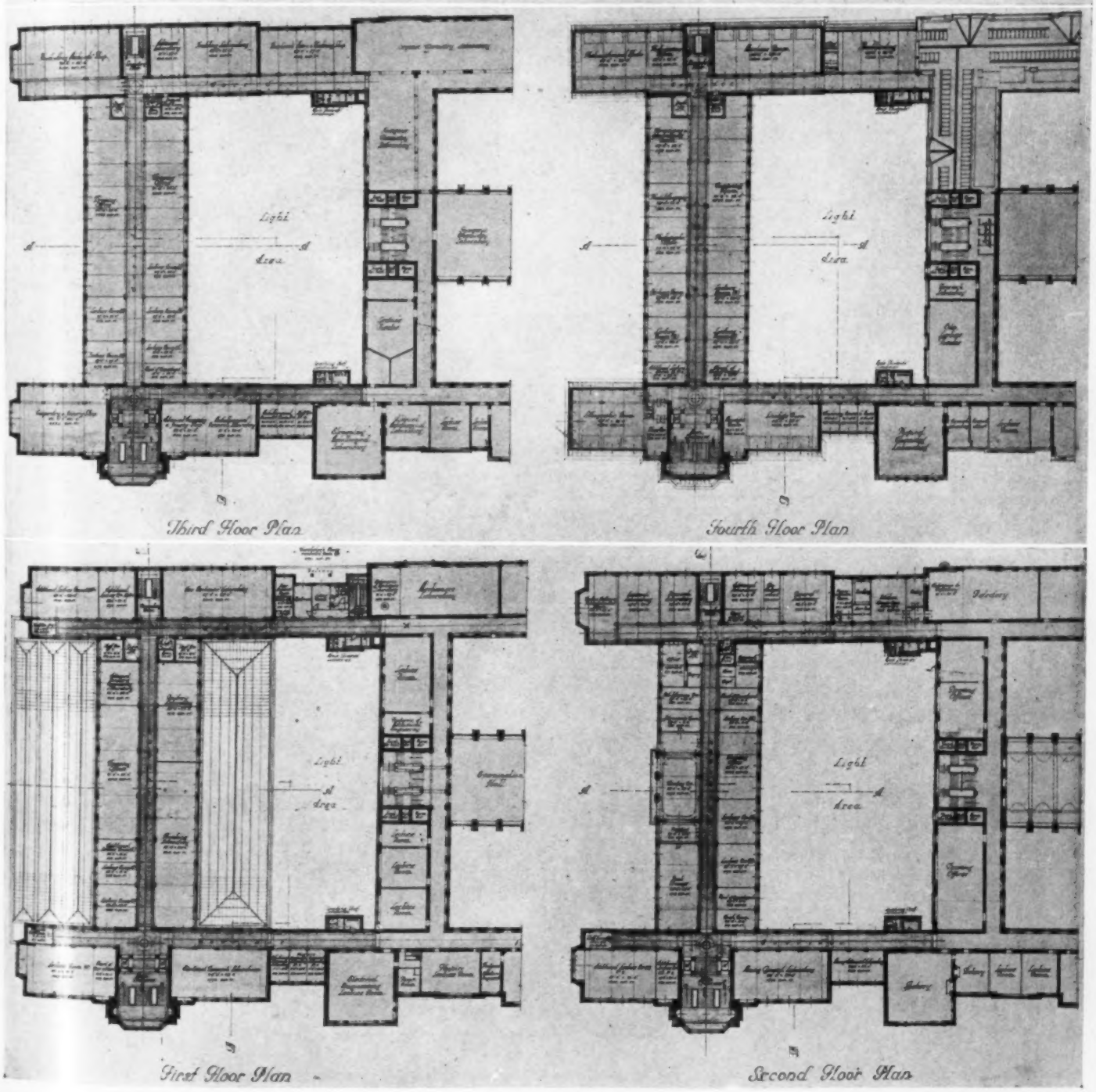
MESSRS. BRADSHAW GASS & HOPE, FF.R.I.B.A., Architects.


City of Manchester
Proposed Extension to the Municipal College of Technology
Elevation to Coburg Street
Section on Line B-B
Elevation to Whitworth Street.
Section on Line A-A

Manchester Municipal College of Technology, Proposed Extensions: First Premiated Design.

MESSRS. BRADSHAW GASS & HOPE, FF.R.I.B.A., Architects.



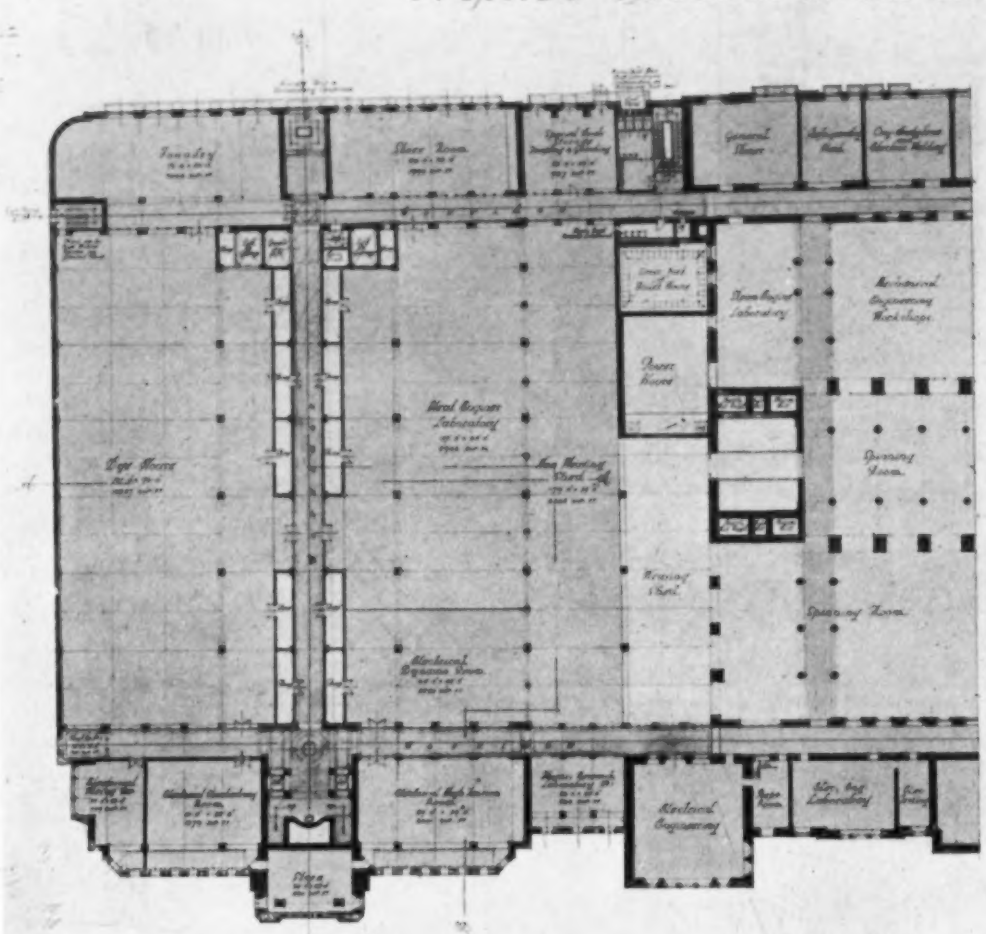


Manchester Municipal College of Technology, Proposed Extensions : First Premiated Design.

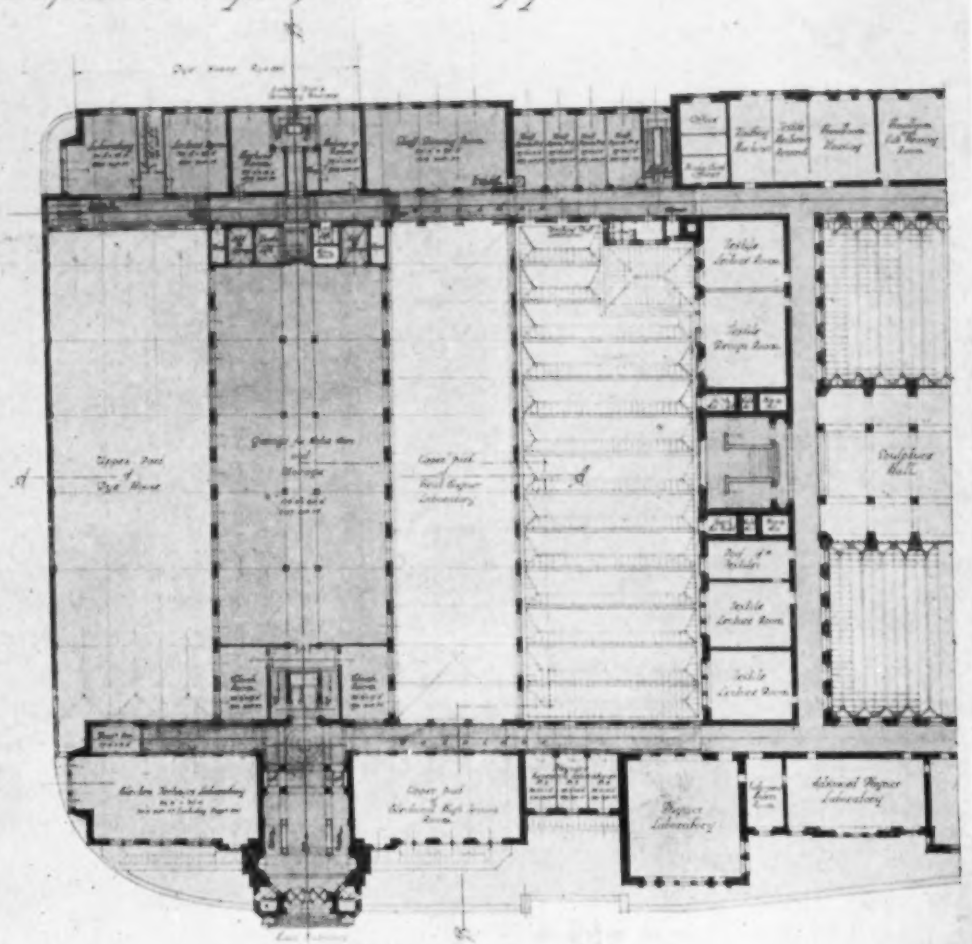
MESSRS. BRADSHAW GASS & HOPE, FF.R.I.B.A., Architects.

City of Manchester

Proposed Extension to the Municipal College of Technology.



Lower Ground Floor Plan

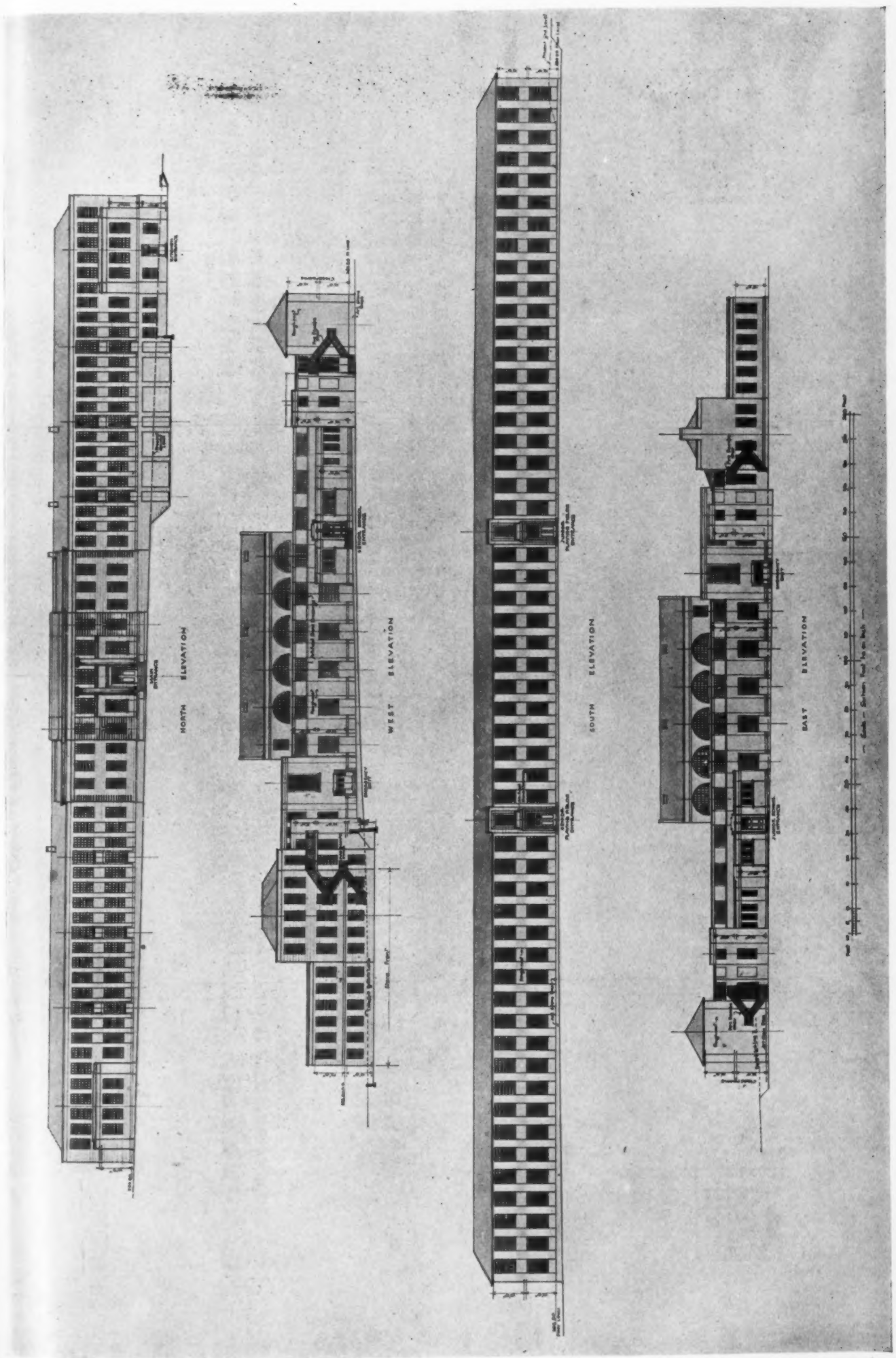


Ground Floor Plan

Scale: Sixteen Feet to One Inch

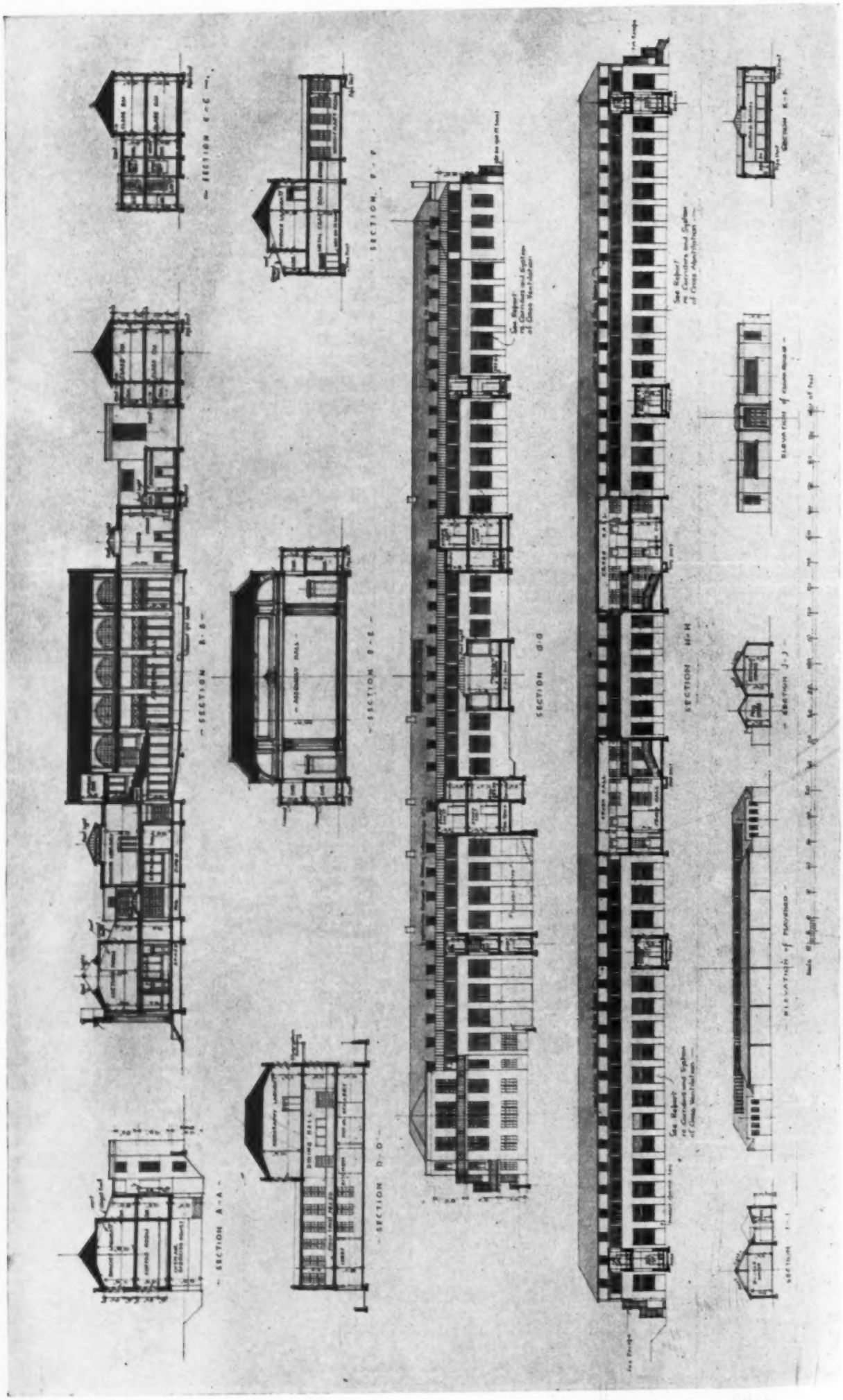
Manchester Municipal College of Technology, Proposed Extensions: First Premiated Design.

MESSRS. BRADSHAW GASS & HOPE, FF.R.I.B.A., Architects.



George Watson's Boys' College, Proposed New Secondary School : First Premiated Design.

MR. JAMES B. DUNN, A.R.S.A., F.R.I.B.A., Architect.



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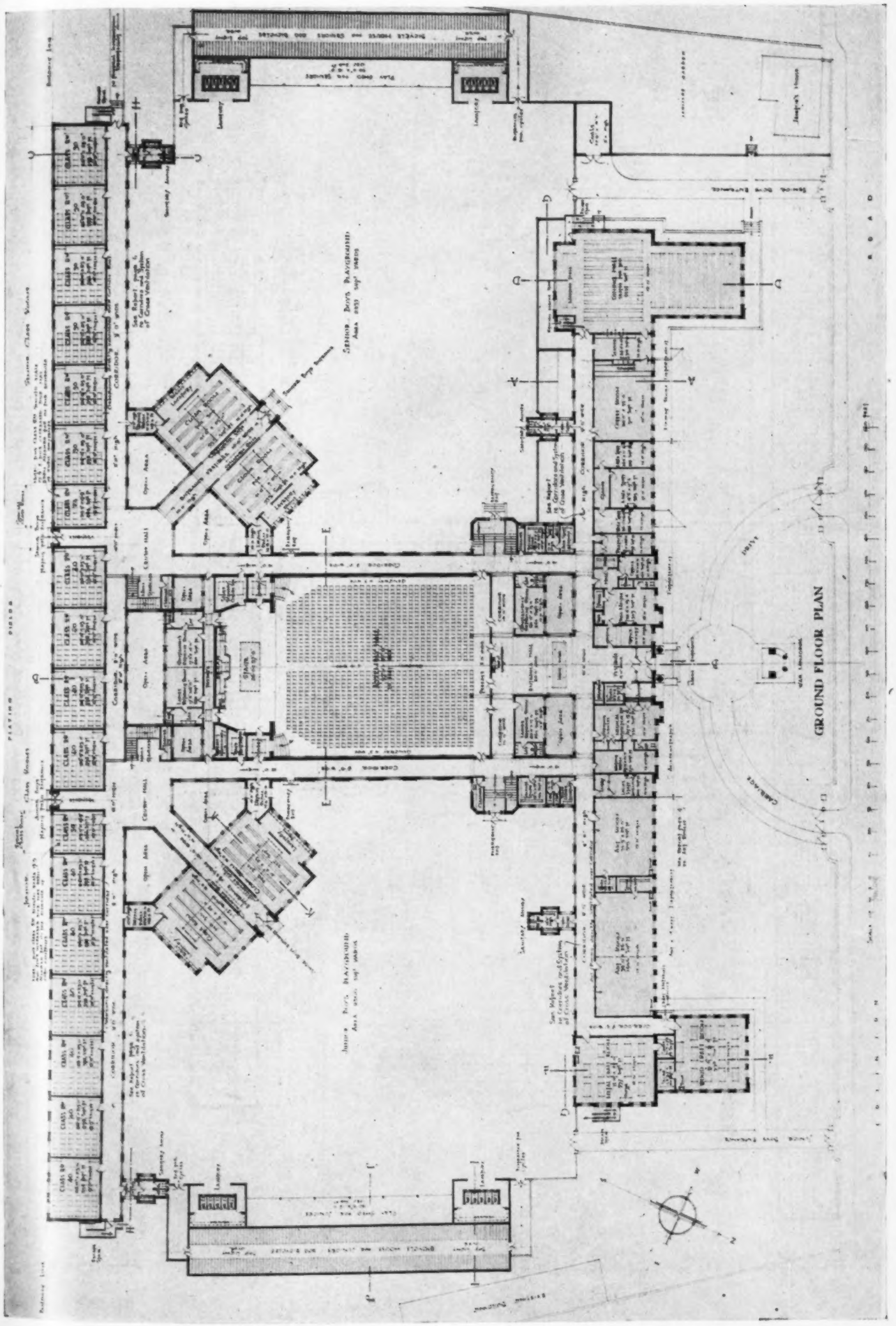

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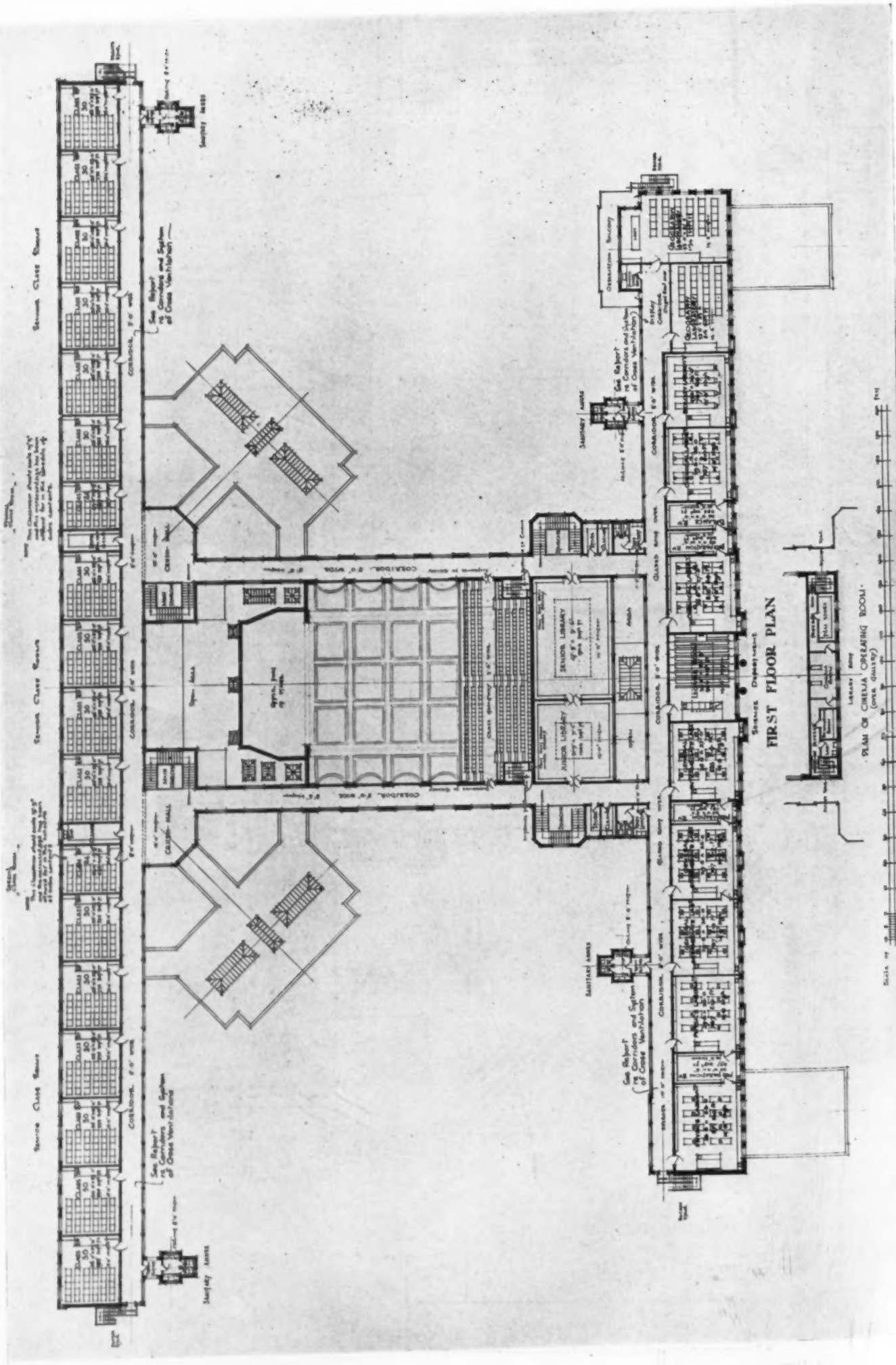

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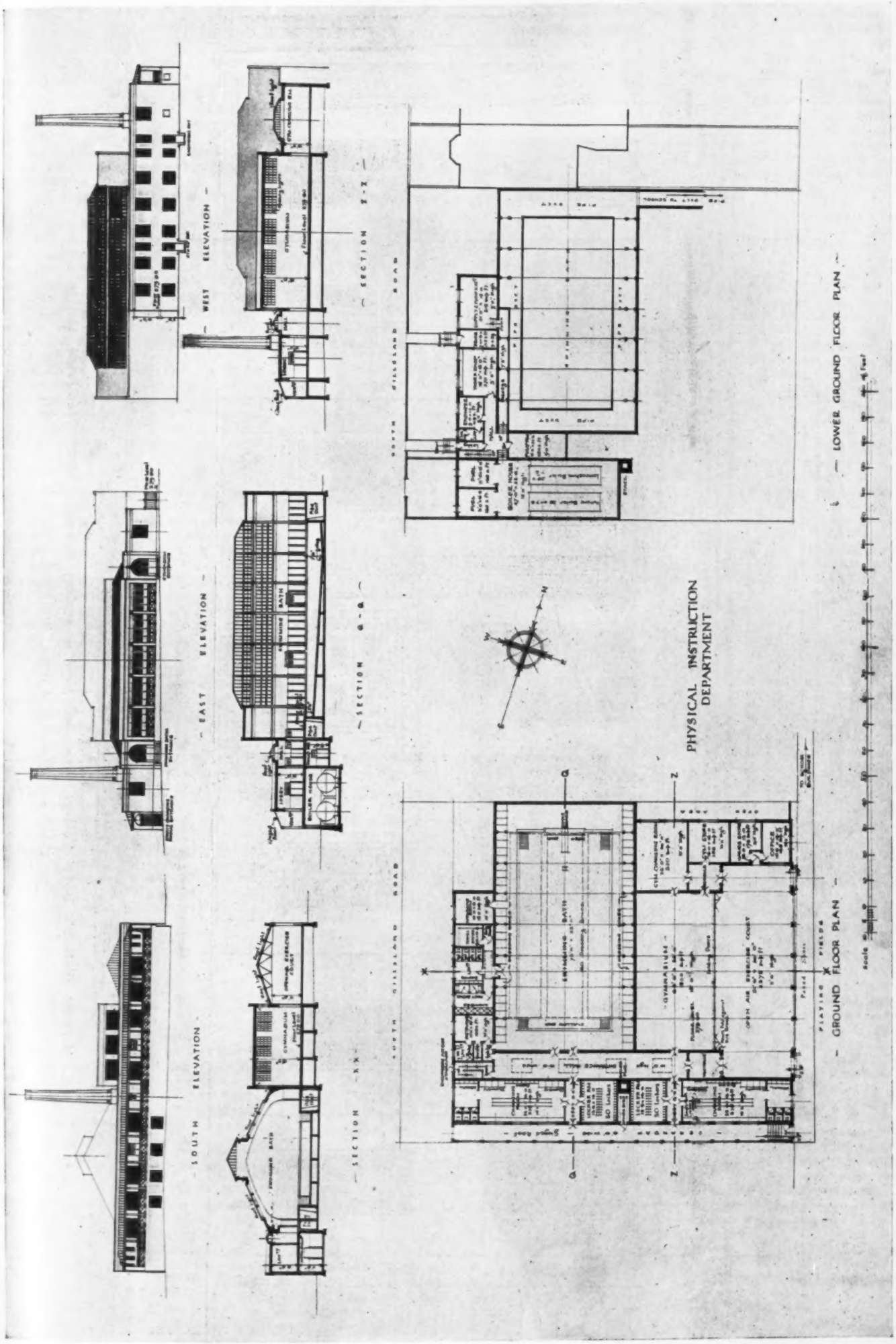

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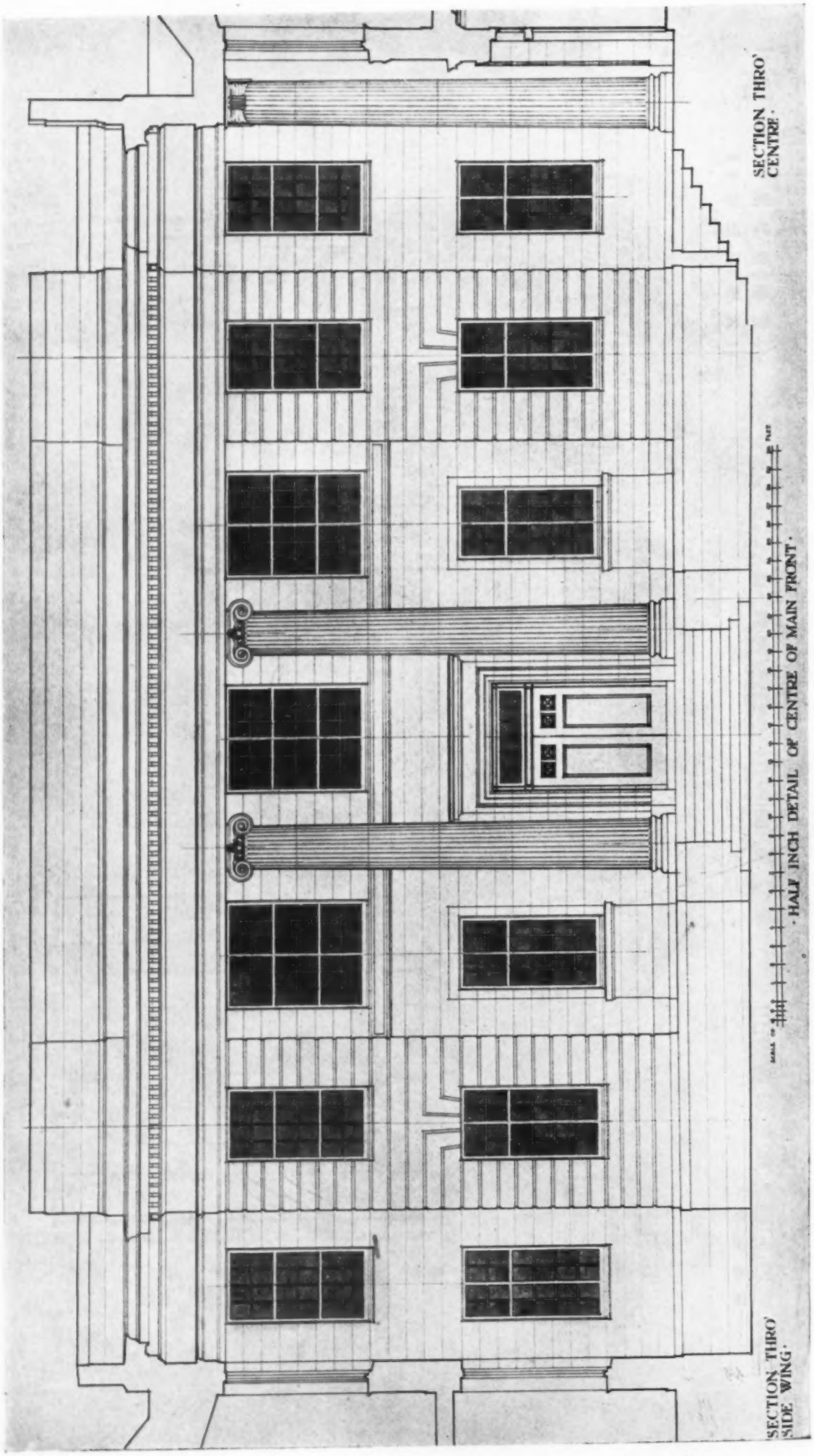


George Watson's Boys' College, Proposed New Secondary School: First Premiated Design.

Mr. James B. Dunn, A.R.S.A., F.R.I.B.A., Architect.

THE LAW OF LIGHT—DEGREES OF OBSTRUCTION

THE recent case, Dare and Another *v.* Strand and Savoy Properties, Ltd., a brief report of which appeared in our issue for May 11, is arousing some discussion in certain quarters because the judgment delivered in the case is being read as reviving the old principle, which at one time was adopted in certain legal decisions, of applying a fixed angle of obstruction, 45 deg., as the test as to what would cause an actionable infringement of the right to light. That is a test which, as we showed in our articles on "The Law of Light" in 1925, was never universally used as absolute, and which since the decision of the House of Lords in Colls v. Home and Colonial Stores (1904, A.C. 179) is never likely to be used as absolute, for the real test as laid down in that case is now recognised to be whether a nuisance is caused, that is to say, whether so little light is left that the premises are rendered substantially less fit for use as a residence or for business purposes. Before the decision in Colls case there had been certain decisions which had proceeded on the principle that all the light coming to the dominant premises could be claimed but those cases were absolutely over-ruled in that case by the House of Lords.

When the obstructing building has been erected and the dominant tenement is standing intact, the question whether it causes a nuisance can be determined by actual inspection and experiment, but in this connection it must be remembered that the two buildings as they stand have to be regarded with all the light possessed by the dominant tenement, for as Lord Lindley said in Colls case, "As regards light from other quarters, such light cannot be disregarded, for as was pointed out in Dyers' Company *v.* King (1870, L.R. 9 Equ. 438), the light from other quarters and the light the obstruction of which is complained of may be so much in excess of what is protected by law as to render the interference complained of non-actionable. I apprehend, however, that light to which a right has not been acquired by prescription or grant, and of which the plaintiff may be deprived at any time, ought not to be taken into account.

But there is another class of case which has come into prominence since the decision of the House of Lords in Leeds Industrial Society *v.* Slack (1924, A.C. 851; *The Builder*, January 2, 1925), where proceedings are taken before the obstructing building has actually been erected, and where the parties take the very desirable course of having their respective rights determined before cost has been incurred in erecting buildings, part of which may have to be removed, and these actions are called *quia timet* actions, and here as no actual obstructing building is in existence, it is essential that the effect of any additional obstruction should be pre-determined accurately, and as our readers will know from the report we published in our issue for March 9 of the proceedings of the Surveyor's Institution and the paper then read by Mr. Percy J. Waldram, it is now possible for this to be done and for the results to be agreed between the surveyors on each side. It need hardly be said that *quia timet* actions by no means represent the only cases in which such a pre-determination of future or past conditions may play an important part.

Before the above decision of the House of Lords was given, *quia timet* actions could not be so freely resorted to, as it had, previous to that, been held that damages could not be awarded in such actions, the only remedy being by injunctions, but the House of Lords swept away this distinction, and *quia timet* actions, as should be the case, are becoming the rule and not the exception.

The Stratton-street case which we are considering was a *quia timet* action, and, as Mr. Justice Eve pointed out, the defendants themselves were anxious, in order to avoid the risk of further expense, that the Court should give some intimation of the limit of obstruction which would not involve any infringement of the plaintiffs' rights. The case was free from complications as to light derived from other quarters, as is shown from the following passage from the judgment: "The light is direct light mainly from the east, and this is not a case where there is any lateral or other compensating light, other than of course the usual diffused light which would reach the windows in a street of this width."

Until recently the building had enjoyed a curiously favourable access of light, as the windows overlooked the garden at the rear of Devonshire House, obstructed only by a wall 10 ft. in height and a row of trees behind the wall some 30 ft. in height. Some diminution of this extraordinary access of light had previously occurred by the erection of a building at the rear of that now being erected by the defendants. The building being erected extended directly opposite the three houses of the defendants for a length of 217 ft., and at the pavement level and for some 17 ft. 6 in. above that level the face of the building would be about 45 ft. from the plaintiffs' houses. From the height of 17 ft. 6 in. to 68 ft. there would be a setback of 5 ft. 6 in., and from 68 ft. to 77 ft. a further setback of 6 ft. 6 in. From 77 ft. the roof would slope back, reaching the maximum height of 96 ft.

The angles of obstruction varied from between 51 degrees and 52 degrees on the ground floor, lessening to 32 degrees on the fourth floor, and it is to be noted that the Court, having regard to these angles of obstruction, taken in conjunction with the oral evidence, limited the case to the ground floors of the three houses; but it was not found that nothing actionable could be shown to exist above that level, as the learned judge was reported as saying: "I do not say that there would be none, but on the materials before me it is not necessary, in my opinion, to determine that question"; and he pointed out that if the nuisance to the ground floors had to be abated, the obstruction to the first floor would be mitigated, and so mitigated as to put it in the same position as the upper floors.

Now in this case the Court put the test to be applied as follows:—"There is, I think, common assent by all the witnesses that the point at which the light in the ordinary room becomes injuriously affected is the point at which the view of the sky becomes determined." That, we may observe in passing, appears approximately the same as the "grumble point" referred to in Semon *v.* Bradford Corporation (1922, 2 Ch. 737; *The Builder*, June 23, 1922), and Mr. Waldram, in his paper read before the Surveyors' Institution, when defining inadequacy, stated that: "With a given sky-brightness, the useful light of any interior position depends primarily upon how much sky can be seen from that position, and how high that sky was above the horizon"; but this is not inconsistent with inadequacy being shown *behind* the line where sky ceases to be visible at table height. The Court in this case found that in the building in question the sky area which under existing conditions was visible from a point a little further than half-way across the room would, if the building was erected as planned, not be visible at a greater distance than some 4 ft. from the windows, and this was held to render the room inadequately lighted, or, in other words, to create an actionable interference or nuisance. This finding of the Court, the Judge was careful to explain, was not based upon any artificial standard set up by Mr. Waldram, or anyone else, but upon the expert evidence given generally in the case.

It is to be observed that the actual finding of the Court was that there would be such obstruction to the plaintiffs' light as to cause a nuisance and entitle them to an injunction, and that in that finding there was no mention of any fixed standard of obstruction such as 45 degrees, but the defendants had invited the Court, as we have mentioned above, to assist them by defining the limits of obstruction which would not constitute an infringement of the plaintiffs' rights so that the defendants might know how they stood in altering their plans, and it was in meeting the wishes of the defendants in this respect that the angle of 45 degrees was fixed, based not only upon what the Court acknowledged to be "valuable observations" by Mr. Waldram, but also upon an actual example in the parallel street, where a new building had been erected and set back so as to subtend that angle. This affords no ground for the supposition that this case indicates a reversion by the Courts to the old standard of 45 degrees; that angle was fixed by the Court, at the request of the defendants, as constituting the degree of obstruction that would not be actionable in the particular circumstances of this case—a building in a town with no other direct access of light. It has, however, this effect, that it supports to a great extent the results arrived at by scientific calculation.

We think it is obvious that no fixed angle of obstruction can ever be arrived at applicable in all cases, for in the first place, the amount of light enjoyed by prescription must be a varying quantity; secondly, the light derived from other quarters is a varying element; and thirdly, what has to be considered is not how much light has been taken away but how much is left (see per Lord Lindley, in Colls case, and our article June 12, 1925). Lord Halsbury also pointed out in Colls case that if the law was that persons could claim all the light they had acquired by prescription in 20 years, it would render it impossible for towns to grow, and would formidably restrict the rights of people to use their own land. The principles upon which adequacy or inadequacy are calculated are fundamental, and can be applied to every case, irrespective of locality, but to take one legal decision where any given degree of obstruction has been applied, and to read that decision as laying down the law in other cases, is manifestly wrong. Tests by degrees of obstruction in one direction only do not give an absolute standard; each case must be considered on its merits, due regard being had to light from other directions. Neither does locality create a standard of its own. This was made clear in Horton's Estate *v.* Beattie (1927, 1 Ch. 75; *The Builder*, July 25, 1926). In that case it was contended that in a manufacturing town such as Wolverhampton, a different standard must be applied, but the court negatived that contention, holding that if an obstruction to an ancient light converts a room formerly adequately lighted into one inadequately lighted, it cannot be said no actionable wrong has been suffered, because other houses in the district are also inadequately lighted, and the Court pointed out that the lights of other houses might have been obstructed in the past, but compensation paid in respect of the obstruction. It may be asked whether angles of obstruction as such have any value as criteria? The answer appears to be that although they certainly form no absolute test, yet if applied to cases with due regard to all the surrounding circumstances, they enable an estimate to be made of the result of complete investigation, but this is quite a different thing from applying them blindly by rule of thumb, or asserting that because in one case an obstruction of 52 degrees was not held actionable, then 52 degrees must be innocuous in all cases.

In Semon *v.* Bradford Corporation (*ubi sup*) a case in a town, but where the building enjoyed an unusual amount of light, the angle of obstruction was 52 degrees in one direction only, and the action failed

because there was far less obstruction in other directions, and the floor in question, it was held, would be "an unusually well lighted ground floor," after the defendant's building was erected, but in other cases where the obstruction to the whole aspect has been 52 degrees or less, the action has succeeded. Consideration of average angles of obstruction, however, can go far to save litigation. Conditions in cities often repeat themselves, and to like circumstances the effect of an angle of obstruction which will cause actionable interference can be applied by precedent, as, in fact, was done in the case under consideration. Moreover, now that in *quia timet* actions damages can be awarded, approximate or accurate calculation of the light left can be of assistance in determining whether the nuisance is sufficiently serious to merit an injunction as unbearable, or sufficiently slight to be compensated by damages.

In the case under consideration no question of damages arose, and the angle of 45 degrees was fixed, and an injunction granted on that basis, but it does not follow that in a case where damages are the appropriate remedy, no damages could be recovered where the obstruction was either above or below 45 degrees

ROYAL INSTITUTE OF BRITISH ARCHITECTS

At a General Meeting of the Royal Institute of British Architects held on Monday evening at 9, Conduit-street, the results of the annual elections to the Council and the Standing Committees were made public. Mr. Walter Tapper, A.R.A., was elected President for a second year of office.

The following is a list of the new Council and Standing Committees :—

Council, 1928-1929.

President.—Mr. Walter John Tapper, A.R.A.

Vice-Presidents.—Mr. E. Stanley Hall, Mr. H. V. Lanchester, Mr. G. C. Lawrence (Bristol), Mr. Maurice Webb.

Honorary Secretary.—Mr. S. D. Kitson.

Members of Council.—Professor S. D. Adshead, Mr. H. V. Ashley, Mr. Robert Atkinson, Sir Herbert Baker, A.R.A., Major H. Barnes, Mr. H. T. Buckland (Birmingham), Mr. Walter Cave, Major H. C. Corlette, Sir Banister Fletcher, Mr. H. S. Goodhart-Rendel, Mr. Arthur Keen, Sir Edwin Lutyens, R.A., Mr. T. R. Milburn (Sunderland), Mr. E. C. P Monson, Mr. T. Taliesin Rees (Liverpool), Professor C. H. Reilly (Liverpool), Mr. H. D. Searles-Wood, Mr. F. T. Verity.

Associate Members of Council.—Mr. H. C. Bradshaw, Mr. L. H. Bucknell, Professor L. B. Budden (Liverpool), Lieut.-Colonel H. P. L. Carte de Lafontaine, Mr. G. L. Elkington, Major T. C. Howitt (Nottingham), Mr. Manning Robertson (Dublin), Mr. J. D. Scott, Mr. M. T. Waterhouse.

Licentiate Members of Council.—Mr. A. B. Hayward, Mr. E. H. H. Heazell (Nottingham), Lieut.-Col. P. A. Hopkins, Captain A. S. Reeves, Mr. P. J. Waldram, Colonel N. Huxley Waller (Gloucester).

Past Presidents.—Sir Reginald Blomfield, R.A., Mr. E. Guy Dawber, A.R.A.

Representatives of Allied Societies in the United Kingdom or the Irish Free State.

(1) *Six Representatives from the Northern Province of England.*—Mr. Francis Jones (Manchester Soc. of Architects), one representative to be appointed by the Liverpool Architectural Soc.; Mr. Charles M. E. Hadfield (Sheffield, South Yorkshire and District Soc. of Architects and Surveyors), Mr. J. H. Martindale (Northern Architectural Assoc.), one representative to be appointed by the York and East Yorkshire Architectural Soc.), Mr. T. Butler Wilson (Leeds and West Yorkshire Architectural Soc.).

(2) *Five Representatives from the Midland Province of England.*—Mr. E. T. Allcock (Leicester and Leicestershire Soc. of Architects), Mr. E. C. Bewlay (Birmingham Architectural Assoc.), Mr. J. W. Fisher (Northamptonshire Assoc. of Architects), Mr. S. J. Wearing (Norfolk and Norwich Association of Architects), Mr. J. Woollatt (Nottingham and Derby Architectural Soc.).

(3) *Four Representatives from the Southern Province of England.*—Mr. T. Overbury (Wessex Society of Architects), Mr. H. S. Rogers (Berks. Bucks and Oxon Architectural Assoc.), Mr. B. P. Shires (Devon and Cornwall Architectural Soc.), Mr. J. A. Smith (Hampshire and Isle of Wight Architectural Assoc.).

(4) *Four Representatives of Allied Societies in Scotland* nominated by the Council of the Incorporation of Architects in Scotland.—Mr. J. K. Hunter (Glasgow), Mr. F. C. Mears (Edinburgh), Mr. J. B. Nicol (Aberdeen), Mr. G. P. K. Young (Perth).

(5) *One Representative of the South Wales Institute of Architects.*—Mr. C. S. Thomas (Swansea).

(6) *Two Representatives of Allied Societies in Ireland.*—Professor R. M. Butler (Royal Institute of the Architects of Ireland), Mr. E. R. Kennedy (Ulster Soc. of Architects).

Representatives of Allied Societies in the British Dominions Overseas.—To be nominated by the Council of each of the following: The Royal Architectural Institute of Canada, The Federal Council of the Australian Institutes of Architects, The New Zealand Institute of Architects, The Institute of South African Architects.

Representative of the Architectural Association (London).—Mr. W. H. Ansell.

Representative of the Association of Architects, Surveyors, and Technical Assistants.—Mr. W. H. Hamlyn.

Chairman of the R.I.B.A. Board of Architectural Education.—Mr. H. M. Fletcher.

The Chairmen of the Art, Literature, Practice, and Science Standing Committees.

Art Standing Committee, 1928-1929.

Fellows.—Mr. H. S. Goodhart-Rendel, Mr. C. H. Holden, Mr. E. A. Hunt, Mr. C. H. James, Mr. Arthur Keen, Mr. E. Maufe, Mr. Oswald Milne, Mr. F. Winton Newman, Mr. Louis de Soissons, Mr. G. G. Wornum.

Associates.—Mr. H. C. Bradshaw, Mr. C. A. Farey, Mr. C. St. J. G. Miller, Hon. H. A. Pakington, Mr. W. H. Thompson, Mr. M. T. Waterhouse.

Licentiates.—Mr. R. F. G. Aylwin, Mr. A. S. Soutar, Mr. F. R. Taylor.

Practice Standing Committee, 1928-1929.

Fellows.—Mr. H. V. Ashley, Mr. F. Chatterton, Sir Banister Fletcher, Mr. E. B. Kirby (Liverpool), Mr. G. C. Lawrence (Bristol), Mr. D B. Niven, Mr. J. Alan Slater, Mr. S. J. Tatchell, Mr. F. T. Verity, Mr. H. A. Welch.

Associates.—Mr. T. Scott Barnes, Mr. G. L. Elkington, Mr. H. V. Milnes-Emerson, Mr. W. H. Hamlyn, Mr. J. D. Scott, Mr. C. Woodward.

Licentiates.—Mr. F. R. Betenson, Mr. J. W. Denington, Captain A. S. Reeves.

Science Standing Committee, 1928-1929.

Fellows.—Mr. R. J. Angel, Mr. W. E. V. Crompton, Mr. E. H. Evans, Mr. G. R. Farrow, Mr. W. A. Harvey (Birmingham), Mr. Alan E. Munby, Mr. H. D. Searles-Wood, Major C. F. Skipper (Cambridge), Mr. D. L. Solomon, Dr. Raymond Unwin.

Associates.—Mr. Hope Bagenal, Mr. P. W. Barnett, Mr. E. L. Bird, Mr. Edwin Gunn, Mr. A. F. Hooper, Mr. C. S. White.

Licentiates.—Mr. A. H. Barnes, Mr. G. N. Kent, Mr. P. J. Waldram.

Literature Standing Committee, 1928-1929.

Fellows.—Mr. Louis Ambler, Mr. M. S. Briggs, Mr. A. S. G. Butler, Major H. C. Corlette, Mr. H. P. Burke-Downing, Mr. J. Murray Easton, Mr. W. H. Godfrey, Mr. A. E. Henderson, Mr. A. H. Moberly, Mr. A. Stratton.

Associates.—Mr. H. W. Chester, Mr. A. Trystan Edwards, Professor F. S. Granger (Nottingham), Mr. H. C. Hughes (Cambridge), Mr. A. L. N. Russell, Mr. G. B. Tubbs.

Licentiates.—Mr. A. B. Hayward, Mr. E. M. Hick, Mr. F. H. Mansford.

Notes from the Minutes of the Council.

H.R.H. The Duke of York.—The President reported that H.R.H. the Duke of York had graciously consented to accept election as an Hon. Fellow of the Royal Institute.

Competition for Garage Design.—On the recommendation of the Board of Architectural Education, the following jury were appointed to make the necessary arrangements and adjudicate upon this competition: The President R.I.B.A., Mr. Robert Atkinson, Mr. T. P. Bennett, Mr. W. Rootes, Mr. J. E. Forbes.

Holiday Lectures for Children.—In view of the success which attended the lectures to children given by Mr. and Mrs. Quennell during the Christmas holidays, it was decided, on the recommendation of the Art Standing Committee, to make arrangements for similar lectures to be held in future years during the Christmas and Easter holidays.

The Architects' Benevolent Society.—It was decided to increase the annual grant to the A.B.S. from £100 to £150, and the A.B.S. Council have been informed that the R.I.B.A. will gladly collaborate in any effective new scheme of publicity for the needs of the Society.

Bequest by the late Mr. James Neale.—It was decided to devote the legacy of £1,000 bequeathed under the will of the late Mr. James Neale to the establishment of a bursary for measured drawings of old buildings. The Board of Architectural Education have been asked to draw up a scheme for this purpose.

The Fellowship.—The Council by a unanimous vote elected the following architects to the Fellowship under the powers defined in the Supplemental Charter of 1925 :—

Canada :
- Mr. J. C. M. Keith (Victoria, B.C.).
- Mr. John M. Lyle (Toronto).
- Mr. J. O. Marchand (Montreal).
- Mr. W. S. Maxwell (Montreal).
- Mr. Hugh Vallance (Montreal).
- Mr. David R. Brown (Montreal).

India :
- Mr. C. G. Blomfield (Delhi).

Great Britain and Ireland :
- Mr. A. L. Roberts (Winchester).
- Mr. Cecil Upcher (Norwich).
- Mr. D. H. Burles (Southend-on-Sea).
- Mr. Reginald Fairlie, A.R.S.A. (Edinburgh).
- Mr. George Mackie Watson (Edinburgh).
- Mr. Herbert Norman (L) (Northampton).
- Mr. Wm. Keay (Leicester).
- Mr. W. K. Bedingfield (Leicester).
- Mr. A. V. Rooke (Plymouth).
- Mr. R. H. Gibson (Belfast).

THE ESSEX SOCIETY OF ARCHITECTS.

A general meeting of the Society will be held on Wednesday, June 13, at the Albert Hall, High-street, Colchester, at 6 p.m., when Professor C. H. Reilly, O.B.E., M.A., F.R.I.B.A., will give a lecture on "Liverpool Cathedral." Previous to this a conducted tour will be made at 3 p.m. to points of interest in the town. Members will assemble outside the Castle. After the lecture members will meet at the Red Lion Hotel, High-street, when the principal guests of the occasion will be entertained to dinner. Members who wish to take part in this function should send in their names on a slip, to be obtained from the Hon. Sec., Colchester and District Chapter, 3, West Stockwell-street, Colchester, as early as possible.

HOSPITALS AND INSTITUTIONS CONFERENCE

AT this conference, which was held on Wednesday, May 30, at the Horticultural Hall, Vincent-square, Westminster, there was a special session, organised by Professor Beresford Pite, M.A., F.R.I.B.A., for the discussion of the subject, "Problems of a Hospital Architect." There was also an exhibit of plans of typical hospitals and institutions throughout the country. Mr. Alner W. Hall, F.R.I.B.A., occupied the chair.

Opening the discussion, Mr. William A. Pite, F.R.I.B.A., said no one could examine the remarkable exhibition of drawings in the hall without being struck by the great advances which have been made with hospital design in recent years. From inconvenient, dread and repelling buildings, suffering from faulty planning and unnecessary trappings, we were brought to methods of simple and direct lay-out and simple artistic architectural treatment, free from unnecessary ornament and elaboration. All this surely had a salutary influence on patients who had unwillingly to dwell for a time in hospital, and assuredly for those whose calling in life was to minister to their cure. This was all to the good.

The requirements of hospitals had relation to site, questions of aspect, difficulties of levels, and numerous other conditions, such as: the number of beds required, their distribution and extension; expansion — and elasticity which would meet the present requirements and the probable needs of the future. The needs of to-day were insistent; in a short time they would be antiquated. The call of extended knowledge and experience would make present demands, which should be borne in mind in order to avoid unnecessary destruction to secure future extension.

The needs of the city or district had to be considered; the great hospital with school and its link with the adjacent university; the town hospital in an industrial area; while the little cottage hospital, always a difficult problem, called for constant study and unremitting care. All of these they hoped in time to come to find associated in some regional scheme, the smaller hospital looking to the larger for specialised assistance in treatments impossible otherwise to secure.

The underlying principles, however, of organised arrangement were fundamentally similar and had a very definite relation to the patient in bed—that was the unit upon which the whole detail of planning depended, for it was for its occupant and his cure that the hospital existed. To the bed, and from the bed, all the hospital services radiated—medical, surgical, and administrative. The theatre, the kitchen, and most other departments all rendered service to the healing and sustenance of the patient, until he was sent out to the convalescent home to complete his convalescence. This afforded a topic for discussion; the portentous waiting lists at the hospitals rendered it necessary that the beds should be available for fresh cases as soon as possible.

The problem of the cost of production was ever present. It was necessarily high; and efficiency was unattainable without corresponding expense; durability had to be considered in relation to economy, and first cost might prove to be the highest economy, and efficiency would be secured if rightly directed at the outset. There was a constant call for new requirements which had to be provided. In the light of economical arrangement they had to ask themselves whether they had gone as far as ordered progress permits in their general arrangement of buildings, of lay-out, of centrality of administration in their plans.

Had they attained to anything approaching perfection in the strict maintenance of the pavilion principle in arrangement? Could it be shown that patients attained a speedier recovery in wards of the pavilion type rather than in those more general in America, or were we about to revert to the discarded double-wing ward as in the old King's College Hospital and other types? The tradition at St. Bartholomew's Hospital, which was somewhat similar, and which, though, was possibly being modified, seemed to be carried on in the extensions at that ancient hospital. There was real cause to move with the greatest circumspection, and to avoid experimental arrangements which could only leave a legacy of serious difficulty to those who followed on after them.

What of the principle of hospitals of single beds, as that erected by the munificence of Mr. Henry Ford? It was ideal, but costly in construction and service. This might have had its origin in the interesting Pasteur Hospital, Paris, planned for isolation—a brilliant and permanent idea. In this connection reference might be made to the provision for paying patients. This was being met in some hospitals by providing three or four private rooms on each ward floor, with their own separate sanitary services. This provision was greatly appreciated in small towns, and was found to be of great financial value to the hospital and the raising of its local character. But pay wards had their problems of nursing and service, and their place in the general scheme. Speaking generally, they were better away from the ward unit and were best situated in a separate block. The public demand for this service would have to find a place in all hospitals of the future. The idea of the single-room plan had been somewhat curiously evolved from the prison cell—"cellulaire"—but there was naught of the prison about these rooms of recovery, and it was generally admitted that a patient made a quicker approach to recovery in a single room than in the open ward.

We might be led to consider the question of the open ward of, say, 24 beds. Were we content with the arrangement? We had before us types of wards in America of about 40 ft. in width, divided by screens into sections of four or more beds. There might be advantages to the patient of privacy, and a more social aspect, in a small association of beds, but what of ventilation and supervision and other considerations? Such an arrangement as indicated would involve a width of block of about 40 ft. as against 26 ft. to 28 ft. Structural questions would arise of support of floors and the necessary restriction of spans for support and the retention of practically flat ceilings. There was the uncertainty of natural or cross-ventilation, which we had understood to be ineffective, with windows on opposite sides, beyond 28 ft. in width. We might agree that mechanical ventilation for wards in this country would never take the place of the so-called natural system.

In considering wards we must not forget the particular requirements of children. It was undoubtedly most undesirable to have large open wards. They should be subdivided into sections, say, of one, two, and four beds, divided by metal screens and glazed. In this way the risk of the spread of infection can be largely reduced. Special services should be devised; a play-compound provided; ample balconies or ready access to roof flats where open-air treatment can be secured. The same principle applied to maternity; there should be a series of small wards of, say, four beds, and the arrangement of plan should be of a progressive nature, pre-natal and post-natal. The arrangement outlined also limited the risks of infection.

To all wards the conditions relative to the administrative end applied so that the ward and its associated services became a self-contained entity. This section in recent years, not without considered reasons, has grown in a remarkable way, so much so that to a large ward the administration which included single-ward beds might be nearly equal to a third of its length. And here we were brought up against the projecting sanitary towers. They were a wonder in their time, and some of the earliest specimens might be studied at the Herbert Hospital, Woolwich; but their day was over, thanks to the advance of modern sanitation. But we should not depreciate or minimise the advantage and importance of some measure of cross-ventilation; far from it. There must necessarily be much unpleasantness about bed-pan drill; we wished to minimise this and to make the essential conveniences more effective. We hope that the balanced architectural effect of two sanitary towers at the far end of the ward had passed, one of these being used as bathroom. By their presence very valuable space, so essential for the balcony, was lost and the access of direct sunshine lessened. We judge these obstacles a dead loss in every way. The right position was at the administrative end. This naturally must increase the required space, but there was a great saving in brickwork and length of drainage, besides undoubted advantages gained. The position suggested was undoubtedly a sound one, and an economy both to the large ward and the single-bed wards. They should have their own separate service and bath accommodation entirely separate from the general ward.

The detail necessary in planning the sink room and providing cut-off ventilation for the w.c. lobby was not beyond the ingenuity of the architect. A position in the centre of the ward had been advocated as being generally the most convenient; however this might be, everything else was against it. Naturally, to be placed on the east side, it becomes a formidable cutter-off of valuable early sunshine, and this with the constant traffic to and fro was sufficient condemnation. The bathroom and laboratories did not call for similar isolation; these were most conveniently placed opposite the sanitary annexe, and both should be readily reached and without annoyance to the patients in the end beds.

It was important to secure quiet as far as possible—a most difficult problem in hospitals. The telephone should be placed so as to be readily accessible, but only so that conversations between the sister and the surgeon or other official should not be heard by a patient in a single ward adjacent. These and many other points would no doubt present themselves for discussion.

Questions were then asked by Dr. Forrest, of Belfast, Mr. Alner Hall, and others. After Mr. Pite had replied, a general discussion took place.

The Exhibition.

The architects' drawings which were on view at the Exhibition gave a good example of the kind of work which is being carried out to-day, from the cottage hospital to the large general hospitals in London and the provinces. Looking at the block plans of new hospitals a number of these seem to have a similarity in lay-out, that is with the administration block central, and a long corridor running east and west connecting up the ward units, which are placed on the south side, operating theatres and treatment units being placed on the north side. The corridor is continued at ground floor in the form of a covered way connecting the nurses' home with the several hospital units.

Messrs. Pite, Son and Fairweather have taken full advantage of the contour of the ground in the Woolwich and District Memorial Hospital, by curving the corridor and radiating the ward units. Looking at the plans, this form of communication from

one unit to another appears good, but turning to the section and finding that there is only a first floor one is inclined to think that vertical communication in the form of lifts would be better than these long corridors. In comparing the ward unit of the general hospital, there seems a general tendency to place the sink room at the entrance end of the ward. The advantage of placing it in this position is, that it serves the single-bed wards; but, on the other hand, it throws the whole of the traffic in and out of the ward at one end, whereas by placing the bath, lavatory, w.c.s and sink room at the other end of the ward—as indicated by Mr. Alner W. Hall in the Middlesex Hospital rebuilding scheme—the nursing side of the patient is from one end, while doctors, students, food, etc., come in at the entrance end, the result being that traffic is more evenly distributed.

Messrs. Adams, Holden and Pearson in the new Torquay Hospital place a balcony at the end of the ward, and on either side place escape stairs, sink room, lavatory and w.c.s. These certainly have their good points, and have possibilities of development. The wards all indicate accommodation for sixteen to twenty-four beds, and with two exceptions follow the same line; the first exception is not in a large hospital; Messrs. Elcock and Sutcliffe in Warminster Cottage Hospital indicate the beds placed lengthwise of the ward with screens between the heads of beds; one side of the ward is given up to window space between the points of support. The other exception is Messrs. Lanchester, Lucas and Lodge's plan for the extension of St. Bartholomew's Hospital, but quite possibly the hospital desire to continue with the same type of ward which they already have, that is the spiral ward. Looking at the plan one is inclined to think that the adoption of the Warminster Cottage Hospital scheme of placing the beds parallel with the major axis of the ward and with a central space would give better cross ventilation, since the screen at the head of the beds would be at right angles to the outside walls instead of as indicated.

Messrs. Pite, Son and Fairweather show plans of King's College Hospital, Radnorshire War Memorial Hospital and proposed Infirmary, Doncaster; the latter, one would like to have seen at a larger scale. In the Greenwich Union Nurses' Home, the principal thing one notices is the placing of the four recreation rooms for sisters, first, second and third year probationers. On occasions all these rooms can be thrown into one by the removal of screens.

Messrs. Paine and Hobday give plans of a nurses' home for Queen Mary's Hospital, Carshalton, for the M.A.B. The central block consists of dining-rooms and main kitchen for the home and a typical bedroom block is shown. The grouping of the three dining-rooms each with their own service in close touch with the kitchen, has been well thought out. Mr. Leslie T. Moore gives plans of cottage hospitals at Teignmouth, Northwood and Selby, other hospitals of this nature are shown by Messrs. Kenyon and Livock in Weybridge Cottage Hospital, and Messrs. Elcock and Sutcliffe in Warminster Cottage Hospital, all indicating the general lines on which this type of hospital is planned. Messrs. Adams, Holden and Pearson show plans of Torquay Hospital in which every advantage of the sloping ground has been taken. Another type of hospital given is the King Edward VII. Sanatorium, Midhurst, which is illustrated by plan and photographs.

Messrs. Elcock and Sutcliffe give ten sheets of the New Bethlehem Royal Hospital. The lay-out does not follow the general hospital lines, but each unit has been so sited that the patients get the maximum amount of sun in their bed and recreation rooms.

Hospital at Davyhulme, Manchester, and Wolverhampton and Staffordshire Hospital are by the same architects. The latter is an extension with out-patients' department on the ground floor and with two general and isolation wards on first floor.

Messrs. Lanchester, Lucas and Lodge give plans showing the new ward and theatre unit at St. Bartholomew's Hospital, also additions to Stockton and Thornby Hospital of nurses' home, out-patients and ward units.

Mr. W. T. Milburn shows the alterations that are being made to the Sunderland Royal Infirmary.

Mr. Alner W. Hall has six plans showing the extent of the rebuilding of the Middlesex Hospital; the four sites on which the hospital will eventually stand are connected with each other by means of subways under the streets. Plans and sections are given of the west wing on the fifth floor, of which a good operating theatre unit has been provided.

Mr. Wallace Marchment gives plans of Watford and District Peace Memorial Hospital and Peterborough and District War Memorial Hospital.

Mr. Morley Horder shows plans and elevation of the London School of Hygiene and Tropical Medicine from which much can be learnt.

Messrs. Nicholas and Dixon-Spain have plans of Qasr-el-Aini Hospital, but, unfortunately, these plans will not mature to actual buildings on the site for which they were planned.

THE SURVEYORS' INSTITUTION

The annual general meeting of the Surveyors' Institution, which this year attains its diamond jubilee, was held on Monday at the Institution's premises in Great George-street, Westminster. The proceedings took place in the Lecture Hall, which has been remodelled from designs by Mr. Sydney Tatchell, F.R.I.B.A., and has been panelled throughout in English oak in commemoration of the diamond jubilee year. Mr. E. S. Cox (York), the retiring president, presided. We take the following extracts from the sixtieth annual report of the Council :—

While it is the primary duty of the Council to present, at the annual general meeting each year, a review of the matters which have claimed their attention, and of the action taken thereon, during the year immediately past, it is not unfitting, perhaps, on the eve of the Diamond Jubilee of the Institution to refer to the progress achieved during the six decades of their existence. The first annual report of the Council, presented in 1869, recorded the election of 162 members, 38 associates, and 2 students. In May, 1928, the class of Fellows numbered 2,627; Colonial Fellows, 128; Professional Associates, 2,851; Associates, 38; Probationers, 967; and Students, 406; a total, including 31 Honorary Members, of 7,048. Of the 24,805 candidates who have entered for the preliminary and professional examinations since these were first established in 1881, 16,025 have been successful.

The Examinations.

The special test examination, which is a scholastic test for candidates over 25 years of age, and an alternative to the preliminary examination, was held for the first time this year. The syllabus comprises papers in advanced arithmetic, elements of economics, essay writing, and general knowledge. In order to ensure that future candidates for the professional examinations have attained a definite standard of general education, they will be required henceforward to have passed the preliminary or the special test unless they can claim exemption on the ground of having passed a recognised public examination of equivalent standard.

It was decided during the year to grant exemption from the professional examinations to graduates of London University in the course of B.Sc. Estate Management, who were desirous of attaining membership.

The reports of the examiners during the past few years have indicated that many candidates have found difficulty in grasping the principles underlying the knowledge they have acquired and in applying it to the practical problems of their future profession. During the year the Council referred the matter to their Education Committee, whose report proposed that the examinations should be so reorganised as to ensure that the training of candidates shall proceed by gradual stages from scholastic to technical instruction, with a proper grounding in the basic principles of knowledge necessary for the surveying profession. The scheme, of which details will be available at an early date, has been approved by the Council, and will operate for the first time at the examinations of 1932. By this means it is hoped that the dangers of mere superficial "cramming" will be avoided or minimised.

The Special Diploma Examinations.

Of the special diploma examinations two were held in June, a sufficient number of candidates having presented themselves for the diplomas on rating and forestry. Out of the thirteen candidates for the former the following were successful: Messrs. T. G. Daniels, F. G. Fleury, C. H. King (who was awarded the Rating Surveyors' Association Prize), F. O. Lyster, and W. S. Wills. Unfortunately, no candidate was successful of the five who entered for the forestry diploma examination. The five special diploma examinations are held triennially, and also in an intermediate year in any subject for which five or more candidates enter. The next triennial year falls in 1929.

The present abnormal demand for the services of surveyors able to undertake valuations for rating purposes has been reflected in the number of candidates for the rating diploma, which has now become generally recognised as indicating the expert in that branch of the profession. The Council, however, would urge members not to forget the advantages afforded by study of the other diploma subjects, namely, forestry, sanitary science, agricultural and tenant-right valuations, and land surveying and levelling.

The College of Estate Management.

In the recent professional examinations of the 351 candidates, including those from Scotland and Ireland who were successful in the intermediate, and the 268 who passed the final, 228 and 193 respectively were prepared by the College, as were seven out of the eight candidates successful in the special single examination for degree-holders. All the Institution prizes and medals were obtained by students of the College.

The Standing and Special Committees.

During the year under review there have been twelve meetings of the Council, besides numerous meetings of the Standing and Special Committees, and the nature of the questions which the latter have been called upon to consider has been no less varied than in the past. The Council have received valuable assistance from other members of the Institution who have acted with them on these Committees.

The Landlord and Tenant Act, 1927, was closely followed during its course through both Houses of Parliament, and, in addition, the Architects (Registration) Bill, 1928, the Sheffield Corporation Bill, 1928, the Rating and Valuation Bill, 1928, the London County Council (General Powers) Bill, 1928, and the Landed Property Agents Registration Bill, 1928, were examined and reported upon, appropriate action being taken in each case.

The negotiations concerning the new standard form of building contract were concluded in the Joint Committee to which

the drafting of that document had been referred. The new form has been referred to the Council of the several bodies represented on the Joint Committee for their consideration, and it may be hoped that a final decision on this important matter may shortly be reached. The thanks of the Council are due to Mr. J. E. Drower, C.B.E., for his valuable and untiring work as their representative on the Joint Committee.

In co-operation with representatives of the Auctioneers' and Estate Agents' Institute the scale of professional charges was amended during the year, the revised document being issued to members on January 1. The observations of the Institution were also invited by the London County Council in connection with the revision of district surveyors' fees, and were acknowledged in a report by the London Building Acts Committee of that authority.

The amendment of the law of rating in London and the preservation of London's squares and open spaces are questions affecting everyday life in the metropolis which have assumed importance during the year. As regards the former, a memorandum was forwarded to the Minister of Health in anticipation of legislation which was expected during the present Parliamentary session, but has not materialised, and, as regards the latter, evidence was given on behalf of the Institution by Mr. C. Gerald Eve (member of Council) before the Royal Commission on London squares.

In response to a request by a Departmental Committee appointed by the Chancellor of the Exchequer, a report as to the directions in which simplification and codification of the existing law of income tax might be effected, was prepared.

Among other questions dealt with may be mentioned the following:—

The registration of party-wall agreements and awards under the Land Charges Act, 1925.

The prescription of building and improvement lines under the Roads Improvement Act, 1925, and the Public Health Act, 1925.

Questions relating to interim development under town planning schemes.

The inconvenience caused to the public by the continuous breaking up of roads.

The provision of a standard British specification for concrete kerbs, channels and quadrants in Portland cement.

The principles to be observed in the laying out of cross-roads, junctions, and corners of highways.

The County Branches.

The annual conference between the Council and the chairmen and honorary secretaries of county branches, which was held on February 6, was fully attended, and a valuable discussion on a number of affairs of domestic interest in the Institution took place. Members desirous of placing any particular subject on the conference agenda paper are requested to communicate with the hon. secretary of their branch before the end of November.

The prizes (announced in our issue for May 18) were then distributed by the President, after which a vote of thanks was accorded to the President for his services during his year of office.

At a meeting of the Council held after the general meeting, Mr. C. B. Fisher (Market Harborough) was elected President for the ensuing year, and the following were elected Vice-Presidents :—Mr. C. H. Bedelles, Mr. G. Turville Brown, Mr. E. H. Leeder, and Mr. J. E. Bidwell. The programme for the Diamond Jubilee Celebrations was given in our last issue.

The Birthday Honours.

Mr. Enoch Hill, J.P., F.C.I.S., chairman of the Building Societies Association, has had a knighthood conferred upon him on the occasion of the King's 63rd birthday.

THE INSTITUTION OF CIVIL ENGINEERS

THE thirty-fourth James Forrest lecture, on "A Century of Inventions," was read to this Institution on the occasion of its centenary by Sir James Alfred Ewing, K.C.B., M.A.

In the course of his address the lecturer said that in that review we had to go back further than the reach of even the longest individual memory. Try to realise what engineering meant in 1828, what was its relation to the science of the day, and what, in fact, was, in that day, the state of science.

The engineers of that period were mainly concerned with roads, bridges and canals; the era of railways was about to begin. Macadam had just been appointed Surveyor-General of roads. He and the first President, Telford, had contributed to convert the roads from sloughs of despond into highways in which the wayfaring man could not err, fit, as the president observed in his inaugural address, for their Scottish compatriots to use in the continued invasion of England. A few years earlier Telford had spanned the Menai Straits with a chain bridge, to take the Holyhead road; and the Southwark Bridge with its cast-iron arches, was erected to the designs of Rennie. But these structures were exceptional; it was a rare thing then to build a bridge of iron. Shortly before that Rennie had done a far finer work, in the beautiful Waterloo Bridge, whose fate was now a matter of anxious concern. It was in stone that the pioneers erected their graceful and enduring monuments of early engineering skill: in bridges, lighthouses, docks and harbours. They made their mark, too, in the cutting of canals. They had covered England with a network of waterways whose economic importance we, children of another age, found it difficult to estimate aright. The success of the canals wrought their ruin. They developed a public need which became too great for them to satisfy, and drove men to seek a solution in the creation of railways. The canal interest, strong though it was, could not stay the coming of a more adaptable and quicker method of traction. It was to aid engineering no less than pure science that we now supplemented private enterprise by the official organisation of research. In this it must be admitted that we followed somewhat slowly the example set by Continental neighbours. The National Physical Laboratory was promoted by the joint efforts of physicists and engineers. That department, established in 1916, remained with us as a beneficent legacy of the war. It was a notable item on the credit side of an account that was mainly one of debit. The war turned men's thoughts, as never before, to mechanical problems. The national intelligence was stirred; blind eyes were opened. They had remained open, said the lecturer, and the Department did much to keep them open. It undertook researches of a type no private worker could attempt. It acted largely through committees, on which experts in one or another industry co-operated with men of scientific habit. The Department also subsidised young research workers. For a young worker to attempt research was often a useful education, and he might discover a real aptitude. But we must not forget that researchers, of the best sort, were like poets; they were born, not made. The century we now reviewed was but a petty unit in the multitude of centuries that made up the recorded and unrecorded history of man. By comparison it was a mere fragment of time, yet how big when judged by the changes it had wrought! If one tested progress by the conquest of inanimate nature, then the century now closing found no parallel in the past. It might be likened to the efflorescence of a plant which for long had been quietly growing to maturity and suddenly burst into flower. We had witnessed, as it were, the change from bud to blossom. What was to follow? What was left for the future engineer to do? When they had celebrated the second centenary of this Institution, of what would the lecturer have to tell? Could the recent astounding pace of discovery and invention be maintained? Or did a time approach when engineers would sit down like so many Alexanders to lament a too-completely conquered world of mechanical things, just as a time came to geographers when there were no more regions to explore? Transport, especially by air, might be made less perilous and more convenient. Communication might be extended to include vision; that was half done already, and he confessed, said the lecturer, to no enthusiasm for the other half. Power would certainly be more generally distributed. But could we expect the engineers of the coming century to bring about developments in the application of natural resources comparable to those of the past hundred years? He was no prophet, but he doubted it. Mechanical devices would, of course, be increasingly used, but probably they would become standardised and taken for granted, like the watches we carried. We could not be surprised if we found interest in them slacken. Improvements would be made, but they would attract little notice, for the things they affected would already be commonplaces of life. It might very well happen that the mental energy of mankind, now flowing so strongly in this channel of ours, would seek and find outlets in other directions. While as engineers we might regret such an issue, we could not but admit that it might prove beneficial to the human race, since, beyond question, there was grave need for progress of quite a different kind.

Chair of Highway Engineering.

We learn that the Institution of Municipal and County Engineers have made arrangements to establish the Chair at the City and Guilds (Engineering) College—which forms the engineering section of the Imperial College of Science and Technology—for a minimum period of five years. The Imperial College is a school of the University of London. The Professor will be appointed as soon as possible, and work will commence with the new session in October. It has been estimated that the interest on a sum of £30,000 will suffice for establishing the Chair in perpetuity, having regard to the existing equipment and buildings which can be utilised. Part of the sum required has already been raised, but there remains about £15,000 still to be found. As the benefit of the better education of the highway engineers of the future will accrue to the highway authorities, it is hoped that every highway authority will forward a contribution from its funds.

If each local government authority will send £1 for each £10,000 of its rateable value, as many have already done, the permanent establishment of the Chair will be assured. We believe over one hundred authorities have already subscribed. All cheques should be crossed "Westminster Bank, Ltd., Chair of Highway Engineering A/C," and made payable to the Institution of Municipal and County Engineers.

The Weavers' Company: Proposed New Hall.

Sir Walter P. Nevill, J.P., the Upper Warden, presided over a dinner of the Weavers' Company at Vintners' Hall on May 29. Mr. Percy W. Nelson, in proposing "The Guests," said that he was disclosing no secret when he said the company hoped in the very near future to build a hall of their own. The company lost its hall in the Great Fire, while a second was destroyed in 1842.

We learn upon authority, however, that the proposed scheme is at present in very elementary stages.

LEGAL QUESTIONS WE HAVE BEEN ASKED

By W. T. CRESWELL, Barrister-at-Law, Associate (late Fellow) Surveyors' Institution, etc.

XXIII.—IS THE "GOODWILL" INCLUDED IN THE SALE OF A BUILDER'S BUSINESS?

THE sale of a builder's business implies also the sale of its goodwill; even though no mention is made in the contract of purchase of the inclusion of the goodwill itself.

As a matter of fact, a transfer of the goodwill alone can be effected without the contract being in writing, though, if it be connected with a sale or other disposition of land, then, under Section 40 of the Law of Property Act, 1925, the contract must be in writing, and the documents properly stamped under the Stamp Acts.

What is "Goodwill"?

It is somewhat difficult to determine what is included in the term "goodwill" It has been stated to be the very sap and life of a business, without which the business would yield little or no fruit. And, again, that the goodwill of a business means every appreciative advantage—as contrasted with negative advantage—that has been acquired in carrying on the business, whether connected with the premises of the business, or its name or style, and everything connected with, or carrying with it, the benefit of the business.

In Wedderburn v. Wedderburn (No. 4) (1856), 22 Beav., 84, Romilly, M.R., said: "There is considerable difficulty in defining accurately what is included under this term 'goodwill,' and it seems to be that species of connection in trade which induces customers to deal with a particular firm. It varies almost in every case, but it is a matter distinctly appreciable which may be preserved (at least, to some extent) if the business be sold as a going concern, but which is wholly lost if the concern is wound up, its liabilities discharged, and its assets got in and distributed. I am of opinion, then, that, both on principle, on the authority of decided cases, and on the ordinary rules of common sense, I must, whenever there is a reputation and connection in business constituting goodwill, treat that as part of the assets of the concern."

Goodwill Includes Property Assets and Effects.

The sale of the goodwill of a business, then, not only includes the whole interest in the reputation and connection existing with customers, of habit or otherwise, tending to make that connection permanent, but also it includes the property, assets and effects of the business unless expressly ruled out of the sale. (See In Re Teas Hotel Co., 1902, 1 Ch. 332.)

How Disposed Of.

Although the goodwill of a business may be disposed of, and dealt with as an entity separate from the particular premises in which the business is carried on, it cannot be dealt with, or separated from the business itself; and, if the goodwill itself arises out of, and it attached to, the premises, so as to enhance the value of those premises, then the goodwill cannot be separated from them.

Value of a Name.

The name of the firm is an important part of the goodwill. The sale of the goodwill of a business includes the right to use the name of the firm; and the vendor of a goodwill is, on sale, no longer entitled to carry on the business in the name appertaining to such goodwill, nor hold out any new business he takes up as being the old business. But a purchaser, on the other hand, must not use the name in such a way as to lead others to believe that the vendor remains the real owner of the business purchased, and so as to expose the latter to any liability therefor.

Generally, too, a trade name which is attached to an owner's goodwill in the class of goods for which it is used, can only be assigned with such goodwill.

Soliciting Customers.

A vendor, on the sale of his goodwill, may continue to deal with his old customers, but he must not solicit their custom. See Trego v. Hunt (1896), A.C.7, where it was definitely laid down that a vendor of the goodwill of a business is not entitled to solicit its customers, and ought to be restrained from doing so; and this rule was extended to a vendor's executors who is carrying out a contract for the sale of the goodwill—the executor may be restrained at the suit of the purchaser from soliciting customers. (See Boorne v. Wicker, 1927, 1 Ch. 667.)

In Partnerships.

The goodwill of a business, carried on as a partnership, forms part of the assets to be realised on distribution; and when, on dissolution of partnership, one partner buys the goodwill, he is entitled to all the rights passing under the goodwill.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

May we appeal to our correspondents to submit their queries on paper of a size easily filed, and written as legibly as possible, or, better still, in typewriting?—ED.

Damp Floor.

[REPLY TO MR. F. PALMER, JUNE 1.]

SIR,—The obvious remedy for dampness rising to linoleum, laid on a quarry tile floor, is to remove the quarry tiles, and sufficient of the concrete, to allow for a floating of waterproofed cement mortar or fine concrete, to be laid over the whole area. This will prevent the dampness rising from the ground, but there still remains the problem of preventing moisture, from the upper surface of the floor, getting in between the linoleum and its cement bed. Unless the joints in the linoleum are very tightly fitted and hermetically sealed, water creeps into them when the floor is washed, and there is also an appreciable deposit of moisture due to the cumulative effects of condensation. The smallest globule of water that gets between the linoleum and the impervious cement surface upon which it is laid can do an amazing amount of damage. Pressure of traffic forces this globule of water from place to place. This movement occurs, first of all, near the joint between two pieces of linoleum, and as these become separated from the cement surface, the edges curl up and admit more water, or permit a greater condensation of atmospheric moisture upon the cold surface of the cement floating, which intensifies the trouble.

I have come to the conclusion that the best safeguard, after waterproofing the surface of the concrete floor, is to interpose between this and the linoleum a substantial thickness of absorbent hair felt, or other material equally absorbent and able to cloak the cement surface against condensation. Bitumenised felt is, in my opinion, neither necessary nor desirable, as it is not so effective in preventing condensation, nor will it permit the diffusion of any moisture that by odd chance might get down to it.

The problem is one parallel, in many respects, with the prevention of condensation upon wall surfaces, and it might with advantage be investigated with greater thoroughness by manufacturers, not only of linoleum, but of other more or less impervious and flexible floor finishings, such as rubber, compressed cork, etc. A definite assurance of successful results and advice as to the best means of securing them should be available to every architect who wishes to specify such finishings.

L. E. WALKER.

SIR,—The cause of the damp rising on the quarry tile floor is the want of free air through being covered over with the lino. If the latter is washed (as I presume it is sometimes) the moisture passes through, and there being little or no suction in the tiles, it remains on the surface, and so is a cause of dampness. Also, if any dampness passes through the tiles upwards, it is arrested by the lino, and so remains. The only cure is to take up the lino occasionally, and let the tiles become dry before replacing the lino. In any case, the lino should not be washed whilst lying on the tiles. CAUSE AND CURE.

SIR,—If the damp is really rising through the joints of the quarry tiles, the only certain cure is to take up the tiles and waterproof the concrete under before relaying. But a good many solid floors get a bad name from the condensation that occurs in muggy weather upon the cold, solid surface. The only cure for this is plenty of ventilation, and, if possible, central heating. MAKE SURE.

Septic Tank: Underpinning.

[REPLY TO "BUILDER," JUNE 1.]

SIR,—The questions are obviously matters for an expert to advise upon on the site and in full possession of the conditions of the case. There are, no doubt, a number of practising architects in the district in which your correspondent does business who for a fee that would be well spent could advise him.

L. M. N.

Responsibility for Laying Sewer.

[REPLY TO MESSRS. P. J. THOMAS & SONS, JUNE 1.]

SIR,—The sewer may be laid by the owner acting upon the specification of the local authority, and to their satisfaction; or it may be laid by the local authority themselves, either contracting to the estate before the street has been taken over, or directly after the street has been taken over. In either case the cost is recovered from the various frontagers unless special circumstances work otherwise. The procedure varies in different districts.

A. C. E.

Breeze Blocks.

[REPLY TO "ALARMED," JUNE 1.]

SIR,—Breeze containing small particles of coal should never be used for these blocks, nor even for bulk concrete, or there is sure to be trouble. The only test I know of is to wash it and remove the coal; even then there is no guarantee of its soundness. The better plan is not to use it at all. Make sure the breeze has been well calcined before use. I have seen plastered breeze-block walls absolutely ruined with thousands of blow-holes, mentioned by "Alarmed." FRANK JAY.

SIR,—The surest way of obviating such defects is to buy only from an established firm of good reputation, such as can be found in almost any district. The materials are not worth economising on, and no firm with any sense will send out a batch that behaves as your correspondent has described.

MERCHANT.

Distempering Fresh Plaster.

[REPLY TO "NEW BUILDING," JUNE 1.]

[The reply to this inquiry has been sent by post.—ED.]

National Gallery Mosaic Pavement.

The new mosaic pavement which has been executed by Mr. Boris Anrep in the vestibule of the National Gallery has been opened to the public. A luncheon was given to Mr. Anrep afterwards by the friends of the artist and the sub-committee of the National Gallery at the Carlton Hotel.

THE BUILDING TRADE

EVERYDAY SCIENCE FOR ARCHITECTS AND BUILDERS—XXII

BY A. M. GILES, B.Sc., A.I.Struct.E., A.M.I.E.E.
Diagrams and Illustrations by M. R. Dumville.

Index of Refraction.

AT the end of the previous article it was stated that for the same two media the sine of the angle of incidence bears a constant ratio to the sine of the angle of refraction, i.e.:—

$$\frac{\text{sin. i.}}{\text{sin. r.}} = \text{a constant.}$$

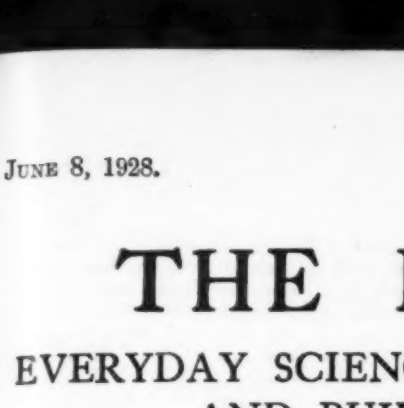
This constant is called the index of refraction of one medium with respect to another, and it is denoted by the Greek letter "mu," (written μ). Its value when light passes from air to glass is $\frac{3}{2}$, and from air to water $\frac{4}{3}$. Naturally the inverse of these, viz., $\frac{2}{3}$ and $\frac{3}{4}$, are the respective values of μ for glass to air and water to air

Displacement.

The applications of principles based upon the law of refraction of light will only be thoroughly understood by a careful study of a few simple experiments. The first of these is illustrated by Figure 63. By this diagram an attempt is made to show that when light passes through a medium different from air, and having its surfaces of separation parallel with one another, it is displaced from its original direction to a parallel direction through a distance shown as "d" in the figure.

A B and C D are the two parallel surfaces of a piece of glass. Let us consider the passage of a ray of light from air through the glass into air again. N P is the normal to the first surface of the glass at the point

FIG. 63.



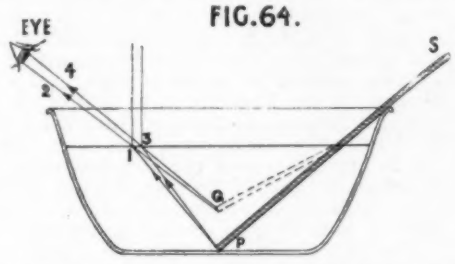
where the incident ray I P meets it. As glass is denser than air, the ray will be bent towards the normal as it goes into the glass and will continue along the direction marked with the arrow-head until it reaches the next surface of separation at P_1. $N_1 P_1$ is the normal to the surface C D at P_1 where the ray strikes the surface. As the light passes into the air from the glass it will be bent away from the normal since air is less dense than glass. The angle $N_1 P_1 R$ is sometimes called the angle of emergence. In the diagram it is marked "i," just as the angle of incidence I P N is marked "i." It is quite simple to show that when the faces of the block of glass are parallel with one another then the angle of incidence I P N and the angle of emergence $R P_1 N_1$ are equal. It is almost obvious also that the first angle of refraction marked "r" is equal to the second angle of incidence, also marked "r."

Now if the glass were removed the light would travel in the straight line I P Q, but when the glass is replaced it travels in the direction I P P_1 R where P_1 R is parallel with P Q. It has therefore been displaced from the direction P Q to P_1 R through the distance "d." This may help to explain how it is that an object looked at through the window appears to be at a different position from what it really is, *e.g.*, if an object were placed at R, in Figure 63, then to an eye placed at I, it would appear to be at Q. The displacement decreases as the thickness of the glass decreases.

Experiment, Figure 64.

This experiment is intended to show why it is that a stick appears bent when put into water, also why a pool of water looks less deep than it really is. A straight piece of stick, marked S P, is placed in a bowl containing water. The end P is resting on the bowl at the bottom of the water. A ray of light from P to point 1, at the surface of the water, is bent away from the normal as it passes into the air along the direction 1 to 2. A second ray of light from P to point 3 is

FIG.64.

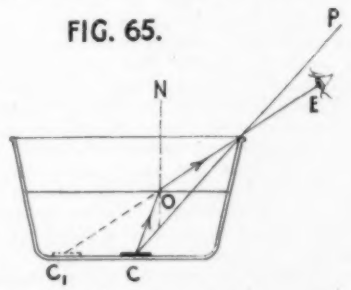


also bent away from the normal along the direction 3 to 4. These two rays of light, viz., 1-2 and 3-4, passing to a person's eye, will appear to come from the point Q. Therefore the end of the stick, which really is at P, will appear to be at Q. In a similar manner rays of light could be shown passing from other points of the part of the stick which is in the water, so that this part of the stick will appear to be along the dotted line from Q to the surface of the water. Since the point P now appears at point Q, then the bottom of the bowl must also appear to be up level with Q, and hence the water looks less deep than it really is. It is not difficult to show that the apparent depth of the water is three-quarters of its actual depth.

Coin and Basin Experiment. Figure 65.

This well-known experiment is very interesting, and is one that anybody can perform with the minimum amount of trouble. At the bottom of an empty bowl is placed a coin. This is shown in the diagram at C. A ray of light passing from C to P just touches the edge of the bowl. By placing your eye at P you would just see the coin.

FIG. 65.



If now you move your eye to a position just below the line C P, then you will not be able to see the coin. Keeping your eye still in this position, marked E on the diagram, get a friend to pour water into the bowl very slowly. Presently, and probably to your surprise, the coin will again come into view. The diagram should make the explanation fairly simple. A ray of light from the coin, marked C O, will on reaching the surface of the water be bent away from the normal as it passes into the air, and will pass along a straight line just touching the edge of the bowl to the eye at E. The coin will now appear to be somewhere along the dotted line O C_1. Its apparent position really depends very much upon the amount of water that has been poured into the bowl before the coin comes into view.

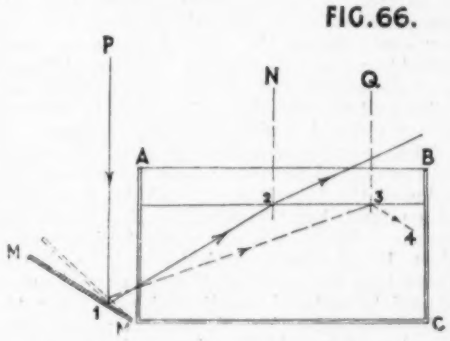
It is anticipated that the description of the last two experiments will help to emphasise the fact that when light passes from a dense to a rare medium, it is bent away from the normal. It has an important bearing upon the *total internal reflection* of light at the surface of separation inside the denser medium. This is the subject of our next experiment, and it is stressed because it is the fundamental principle of pavement lights, or prism lighting of basements, etc.

Total Internal Reflection. Figure 66.

This illustration, which is purely a line drawing, will, with a little explanation, help us to understand why light which has passed into a dense medium may be totally internally reflected. A B C M represents a tank open at the top, and having a glass front and ends. It contains water up to the line marked 2-3. M M is a piece of plane mirror. By the adjustment of an optical lantern we can cause a beam of light to fall upon the surface of the mirror along the direction P1. The arrow heads will indicate the direction of light travel in all cases.

The beam of light will be reflected from the mirror, through the glass end of the tank, where, of course, it will be slightly bent towards the normal, and then pass on to the surface of the water at point 2. Here it will pass into the air, being bent away from the normal N-2. This means that the angle of refraction formed as the light passes out of the water (dense medium) is larger than the angle of incidence in the water at point 2.

FIG.66.



If we continue to increase the angle of incidence at the water surface we shall eventually reach a point at which the angle of refraction becomes 90 deg., i.e., the refracted ray will make a right angle with the normal and lie along the surface of the water. This particular angle of incidence, which results in an angle of refraction of 90 deg., is called the *critical angle* of the medium. It is worth repeating that it only occurs when light passes from a dense medium to a rare one, e.g., glass or water to air. The value of the critical angle for glass is approximately 42 deg., and for water between 48 and 49 deg. These values are not difficult to find, provided we know the "index of refraction" of the medium.

For glass to air $\frac{\text{sin. i.}}{\text{sin. r.}} = \frac{2}{3} = .666$

and r. = 90 deg. and sine of 90 deg. = 1
therefore sin. i. = .666 × 1 = .666
Now the angle whose sine is 0.666 is 42 deg., which is the critical angle for glass.

In a similar way it can be shown that for water, whose index of refraction is $\frac{4}{3}$ the critical angle is between 48 and 49 deg.

Referring again to Figure 66, if, by an adjustment of the mirror M M, we increase the angle of incidence so that at point 3 it is larger than 49 deg., the light will not pass out of the water at that point, but will be totally internally reflected along the direction 3-4.

VALUATIONS UNDER THE RATING AND VALUATION ACT 1925—V

FRACTIONS OF A POUND.

SECTION 22 of the Rating and Valuation Act, which we have referred to as dealing with the ascertainment of rateable values, contains a paragraph (subsection (1) (d)) which deals with fractions of a pound in the rateable value. The paragraph is as follows:—"If the amount of the net annual value and of the rateable value, in a case where those values are the same, or in any other case the amount of the rateable value includes a fraction of a pound, the amount of both those values or of the rateable value, as the case may be, shall be increased or reduced, as the case may be, to the nearest complete pound, or if the fraction is ten shillings, the fraction shall be disregarded." Now it appears that the amount of the net annual value and the rateable value is the same in all cases except where a deduction from the net annual value is allowed in one of the classes of hereditaments specified in the first column of Part II of the Second Schedule, to arrive at the rateable value.

The Central Valuation Committee has considered this question in their second series of representations, and the recommendations were to the following effect: (1) Where the net annual value includes a fraction of a pound and the rateable value is the same, the net annual value column in the valuation list should be left blank and the rateable value should be entered at the nearest complete pound, any fraction which is ten shillings being disregarded. This seems in accordance with Rule 5 of the Form of Valuation List Rules, 1926.

Examples were given. Thus, if the gross value of a dwelling-house is £16, the deduction allowed in Part I of the Second Schedule of 33⅓ makes the net annual value and the rateable value £10 13s. 4d., and this is entered at the nearest pound as £11. If the gross value is £34, the deduction of 25 per cent. makes the annual net value and rateable value £25 10s., and the ten shillings is disregarded, but should the annual net value and the rateable value come to £26 5s., this is entered as £26, the nearest pound.

The second recommendation of the Committee related to cases where the net annual value of the hereditament includes a fraction of a pound, but the rateable value is not the same. These will be cases falling under Part II of the Second Schedule, and the Committee suggest that the net annual value should be entered unadjusted and the rateable value entered to the nearest pound, any fraction of ten shillings being disregarded.

It appears to us that the Committee in some of these examples which relate to hereditaments under Part II of the Second Schedule have made them unnecessarily difficult by entering the gross value, for the Rating and Valuation (Form of Valuation List) Rules by Rule 5 specially direct that no entry in respect of gross value shall be made in the case of a hereditament not belonging to any of the classes specified in Part I of the Second Schedule. But as Mr A. M. Trustram Eve pointed out in his paper read before the Estate Agents' Institute of the United Kingdom, reported in our issue June 1, this raises a difficult question.

The third recommendation was that where the gross value of a hereditament is so low in amount that after the deduction prescribed in Part I and the further deduction (if any) under Part II of the Second Schedule, the rateable value is ten shillings or less, no entry should be made in the rateable value column. A resolution by the Committee numbered 37 we hardly follow, as it appears unnecessary: the Committee resolved that it was to be inferred from Section 22 that fractions in the pound must not be omitted from gross values "in the present state of the law." This seems obvious: Section 22 subs. (1) (d) only aims at getting rid of fractions of the pound in the operative rateable values, and any fraction in the pound in the gross value where that value has to be entered in the valuation list must appear in the net annual value or the rateable value where it becomes adjusted by the process indicated in the sub-section paragraph (d).

The Rent Acts.

In their first series of representations the Central Valuation Committee made no reference to the Rent Acts, but in the second series they expressed an opinion on the effect of that very complicated provision contained in Section 12 sub-section (9) of the Rent Act, 1920. That sub-section is as follows:—"This Act shall not apply to a dwelling house erected after, or in course of erection on, April 2, 1919, or to any dwelling house which has been since that date or was at that date being *bona fide* reconstructed by way of conversion into two or more separate and self-contained flats or tenements; but for the purpose of any enactment relating to rating the gross estimated rental or gross value of any such house to which this Act would have applied if it had been erected or so reconstructed before August 3, 1914, and let at that date shall not exceed (a) if the house forms part of a housing scheme to which section 7 of the Housing Town Planning Act, 1919, applies, the rent (exclusive of rates) charged by the local authority in respect of that house; and (b) in any other case the rent (exclusive of rates) which would have been charged by the local authority in respect of a similar house forming part of such scheme as aforesaid."

The first finding of the Committee was that, having regard to the regulations under which the rents of houses built under the Housing Act, 1919, have been determined, they were satisfied that the rents fixed for houses built under that Act accord on the whole with the rents of comparable houses in the locality, and therefore that no amendment of any of the previous general resolutions of the Committee was necessary. The resolution of the Committee proceeds that the gross value of houses built by local authorities under the Act of 1919, and other houses of a similar kind built (or converted into flats and tenements) since April 2, 1919, or in course of erection (or conversion) on that date, should be determined in the first instance in accordance with the statutory definition of "gross value" and the Committee's previous resolutions in the first series, (3) to (8) and (13). But in some cases the true gross value so ascertained may be less than the rent (exclusive of rates) which is actually charged by the local authority or which would have been charged by them if the house had been built by them under the Act of 1919, and in such cases the gross value to be entered in the valuation list will be the true gross value. But in other cases the true gross value may be more than the rent referred to above, and then the provisions of the sub-section will apply, and consequently the gross value to be entered must not exceed that rent. In making these recommendations the Committee observed that if they led to inequality between the assessments of houses to which the sub-section applies and those of similar houses to which it does not apply, this inequality being founded upon the statute will not render indefensible any higher assessments properly placed upon the similar houses to which the statute does not apply.

The Memorandum of the Rating Surveyors' Association joins issue on this recommendation, stating that the experience of the Association obtained in a number of cases is that the rents of Council houses under a housing scheme do not accord with the rents of comparable houses in the same locality, and that if the above resolution is acted upon lack of uniformity will result.

We can attempt no criticism of these recommendations, but we may observe that this subsection of the Rent Act, 1920, has always created difficulty, especially in view of the fact that houses of considerable value were brought within the Rent Act—as it was applied to houses where "either the annual amount of the standard rent or the rateable value does not exceed" in the Metropolitan Police area £105, and elsewhere £78. It would seem a matter of surprise that this subsection introduced into a measure not relating to rating, and admittedly of a temporary character, was not repealed in the Rating and Valuation Act, but this is not the case, although it is clear that the Rent Acts were present to the mind of the Legislature, as one section in the Rent Act is repealed by the latter Act. The great object of the Rating and Valuation Act was to attain uniformity in rating, yet it is clear that this temporary measure being unrepealed must perpetuate inequality in the new valuations, and thus that its effect will be experienced for some five or more years, even if the Rent Acts are repealed in a year or two.

In the space at our disposal we have only been able to attempt a very imperfect survey of some of the main provisions of this Act and a few of the problems that it raises which may possibly give a rough idea to those who have not studied the question deeply of how the subject has to be approached. The four series of representations of the Central Valuation Committee form a valuable commentary on the numerous questions arising, as the Committee have been in an exceptional position to ascertain points on which difficulty has been experienced. They issued a questionnaire to all Assessment Committees, and in the fourth series they state that replies were received from nearly 300 out of the total of 344, but the information obtained by this means indicated a considerable diversity of practice. The fourth series of representations deals with many of the more difficult subjects, such as the rating of coal mines, advertising stations, hospitals, recreation grounds, petrol stations, and so on, but we will conclude these articles with a brief mention of one of the subjects upon which a diversity of practice is said to exist.

Underground Sewers.

The law on the subject of rating underground sewers has been very confused, but the House of Lords in West Kent Main Sewerage Board *v.* Dartford Union (1911, A.C. 171) held that sewers, whether overground or underground are rateable where the occupation is "valuable" within the meaning of the authorities on rating, and the test of value appears to be not necessarily whether a profit can be made, but the rent a hypothetical tenant would be prepared to pay, and in considering this the owner may be regarded as one of the possible tenants (see West Ham *v.* London County Council (1893, A.C. 562)). Where payments are received from other authorities for leave to drain into sewers it is an *a fortiori* case (see Ystradyfodwg and Pontypridd Main Sewerage Board *v.* Newport Assessment Committee (1901, 1 Q.B. 406)), and this element existed in the West Kent case (*ubi sup*) but the House of Lords in this latter case appear to have laid down in general terms that all sewers, whether underground or above ground to which the above test of valuable occupation can be applied, are rateable and to have disapproved of certain limitations expressed in the West Ham case by Lord Herschell as *obiter dicta*.

The Central Valuation Committee in their fourth series of representations called attention to this important decision of the House of Lords and resolved that while the law remains as at present the Committee had no alternative but to declare that all underground sewers in use should be rated, but reserved the question whether representations should be made to the Minister of Health with the object of securing amendment of the law, seeing the practical difficulties of giving effect to it.

NEW BUILDINGS IN LONDON

The Editor would be glad to receive information for publication under this heading from architects, builders, or other persons concerned.

Beckenham.—GARAGE.—The L.G.O.C., Ltd., have decided to erect a bus garage at Beckenham.

Bermondsey.—DWELLINGS.—Tenders are being invited by the London County Council for the erection of a block of tenement dwellings on the Dickens estate, Bermondsey.

Blackheath. — ALTERATIONS. — The Westminster Bank, Ltd., propose to carry out alterations and improvements to their branch premises. Plans have been prepared by Messrs. E. Procter & Partners, 83, St. Paul's Churchyard, E.C.4.

Brixton-road.—BUILDING.—Messrs. Hillier, Parker, May & Rowden have submitted plans to the Lambeth Borough Council for the erection of buildings on the site of Nos. 222-228, Brixton-road.

Covent Garden.—ALTERATIONS.—Structural alterations are being carried out by Messrs. H. Parkinson & Co., builders, 4½, Wharton-street, W.C.1, to 3, 4 and 5, King-street, Covent Garden, W.C.2. The work is for the London Midland and Scottish Railway, and the plans for the alterations have been prepared by the railway's surveyor.

Fleet-street.—OFFICES.—The demolition of No. 44, Fleet street, started this week. The architect for the new building, which will be used as offices and shops, is Mr. M. K. Matthews, 72, Tottenham Court-road, W. The builder is Mr. F. E. Little, 569, Tottenham High-road, N.

Great Queen-street.—BUILDING.—The negotiations have been completed with the various public authorities and private owners in connection with the new Masonic Peace Memorial to be erected at the west end of Great Queen-street, with the frontage towards Long Acre. The architects are Messrs. H. V. Ashley and Winton Newman, FF.R.I.B.A., of 14, Gray's Inn-square, W.C.1.

Hammersmith.—SHOWROOM.—Messrs. B. Goodman, Ltd., Haggerston-road, E., have pulled down premises at the corner of King-street and Cambridge-road, W., where Messrs. Shoe Rebuilders, Ltd., are to erect a new branch showroom. The contract has been placed with Messrs. J. Marsland & Son, Ltd., 56, South Molton-street, W.1. The architects are Messrs. T. P. Bennett & Son, FF.R.I.B.A., 41, Bedford-row, W.C.

Harrow Weald.—GARAGE.—A large motor-bus garage is to be constructed at Harrow Weald for the L.G.O.C.

Hounslow.—THEATRE.—A company, called the "Hounslow Theatre," Ltd., has been formed to acquire a site in London-road and erect a theatre to accommodate 2,500. A further hall, to seat 400-500 persons, and a restaurant, are proposed. The plans have been prepared by Mr. Cecil Masey, 19, Devereux-court, Strand, W.C.2.

Ilford.—HOUSES.—The Town Council are to proceed with a scheme for the erection of 120 non-parlour houses at Tomswood Hill. Application is to be made to the Ministry of Health for financial assistance and for sanction to loans of £57,550.

Kensington.—BUILDING.—The Kensington Board of Guardians are considering plans for a new X-ray department at St. Mary Abbot's Hospital, Marloe's-road, W.8.

Kingsbury.—HOUSES.—Thirty houses are to be erected in Church-lane, N.W., for the Kingsbury Urban District Council. The plans have been prepared by Mr. R. C. N. Newport, surveyor to the Council.

Lever-street.—ADAPTATION.—The large four-story building in Lever-street, Murton-street and Cross-street, E.C.1, at present occupied by Messrs. J. S. Fry & Co., Ltd., has been bought by Messrs. Barry, Ostlere & Shepherd, Ltd., linoleum manufacturers, Kirkcaldy, who propose to adapt it as their London headquarters.

Mitcham.—HALL.—A scheme for a permanent hall has been adopted by the building committee of the North Mitcham Improvement Association, Ltd., to take the place of the pavilion in the association's grounds at Woodland-way, Mitcham. The president, Councillor J. Owen, has undertaken to prepare plans and supervise the erection of the building.

Mitcham.—HOUSES.—The Tamworth Park Construction Co., 54, Tamworth-park, Mitcham, have prepared plans for 398 houses on the Sherwood Park estate.

Norwood-road.—GARAGES.—The Westmorland Garage, Ltd., have received the Lambeth Council's approval to the erection of lock-up garages and showroom at Westmorland Service Station, Norwood-road.

Oxford-street.—REBUILDING.—Mr. Ernest Webb, chairman and managing director of Messrs. D. H. Evans & Co., Ltd., drapers, announces that plans have been prepared for the rebuilding of what is known as the "Eastern Block" of the company's shops and showrooms. The architects are Messrs. A. E. Hughes & Son, 28, Mortimer-street, W.1.

Poplar. — ENLARGEMENT. — The "Grand Palace" picture theatre is to be considerably enlarged and modernised, provision being made for approximately 3,000 seats. Plans are to be shortly considered.

St. Pancras.—REBUILDING.—The "Victoria" public-house in Charlton-street, N.W.1, owned by Messrs. Whitbread & Co., Ltd., Chiswell-street, E.C.2, is to be shortly pulled down and rebuilt. The new building has been designed by the company's surveyor, Mr. A. R. Mayston, F.R.I.B.A.

Southwark.—ADDITIONS.—Messrs. George Harding & Sons, Ltd., hardware merchants, propose to make considerable additions to their premises in Long-lane, S.E.1. The builder is Mr. Henry Kent, Beacon-road, Lee Green, S.E. Steelwork will be erected by Messrs. Archibald D. Dawnay & Sons, Ltd., Battersea, S.W., and granolithic floors, etc., will be laid by Messrs. Stuarts' Granolithic Co., Ltd., 62, Lincoln's Inn-fields, W.C. The architect is Mr. G. E. Nield, F.R.I.B.A., Outer Temple, W.C.2.

Spectacle-alley. — ADDITIONS. — Extensive additions are to be made to the premises of Messrs. Danes Feather Mills, Ltd., at 2, 4 and 6, Spectacle-alley, E.1. The builders are Messrs. Bovis, Ltd., 43, Upper Berkeley-street, W.1. The architect is Mr. Edwin P. Cameron, F.R.I.B.A., 16-17, Devonshire-square, E.C.2.

Stamford-street. — ADDITIONS. — Alterations and additions are to be made to the premises in Stamford-street and Paris-gardens, S.E.1, of the Cornwall Press, Ltd. The builders are Messrs. Bovis, Ltd., 43, Upper Berkeley-street, W.1, and plans have been prepared by Mr. T. J. Fox, F.R.I.B.A., Doric House, 1, Museum-street, W.C.1.

Waterloo-road. — REBUILDING. — Messrs. David Greig, Ltd., provision merchants, have under consideration plans for the rebuilding and extension of their head offices and warehouses at 145-159, Waterloo-road, S.E.1. The architects are Messrs. H. Payne Wyatt, Son & Partner, 465, Brixton-road, S.W.8.

Welbeck-street.—PREMISES.—Alterations to premises in Welbeck-street, W.1, to the plans of Messrs. Searle & Searle, architects, are being done by Messrs. J. Simpson & Son, Ltd., builders, 48, Paddington-street, W. The constructional steelwork will be supplied by Messrs. Young & Co., 6, Queen Anne's-gate, S.W.1.

Welbeck-street.—A block of residential flats is to be built at 36-37, to the designs of Messrs. Elgood & Hastie, 10, Henrietta-street, W.C. The builders are Messrs. Bovis, Ltd., 43, Upper Berkeley-street, W.1. Steelwork will be supplied by Messrs. Redpath, Brown & Co., Ltd., 3, Laurence Pountney-hill, E.C.4.

Wimbledon.—HALL.—Messrs. Adshead & Ramsey, architects, have prepared plans for a church hall on the land adjoining Holy Trinity Church, Merton-road.

BOOK REVIEWS

Planning.

The Principles of Planning Buildings. By PERCY L. MARKS. B. T. Batsford, Ltd., 94, High Holborn, W.C.1. Fourth edition. Price 21s. net.

To attempt to divide the art of architectural design into distinct water-tight compartments is a dangerous process. A building starts neither by plan or elevation—in fact, it never starts at all until there exists in the mind of the designer some more or less distinct conception as to what it is to appear like in its three dimensions. He is sure to fail who maps out the floors of the rooms into some sort of convenient order, hoping piously that the final grouping may be pleasant, as is he who falls in love in advance with a group form, into which he squeezes the convenience of his arrangements. The whole process of design is, in fact, one and indivisible—to the super-man! There are, however, very few super-men about, and those that exist can no doubt manage very well without text-books. To the rest of us, who are aware that for us the processes of architectural design are by slow and painful stages, a text-book which deals with the contact which our designs are to make with the ground is a work of first importance and interest. If we were disposed to forget that this science of planning, as we call it, is just a part of a whole, Mr. Marks's book would soon disabuse us. His courage in attempting a subject so liable as this to wrong treatment is justified by the need for a fourth edition.

We are glad to see that the subject of Domestic Planning is treated to a separate chapter. There are, of course, many broad principles which apply to all classes of plan, but it would be foolish to ignore that one approaches the design of a home from an entirely different angle from that from which we approach any other type of architectural problem. The garden city and housing scheme seem to have received, perhaps, less attention than one would have expected in a modern edition. The notes on acoustics are valuable additions to the work, without which it could hardly have been deemed complete.

That a text-book first produced nearly 30 years ago should read as a thoroughly up-to-date manual, full of valuable information and data for the student of to-day and to-morrow, in this its fourth edition, bears evidence of the thoroughness and care with which it has been edited. The author is to be congratulated in that he has not wearied of a subject which, but for his skill in handling, might well have proved wearisome to author and reader alike.

Using Set Squares.

"R.'s" Method of Using Ordinary Set Squares, in Drawing and Design. By HARRY W. ROBERTS. London: 9, Queen Anne's-gate. 1927. 6s. net. 108 pages.

This little work is the production of an enthusiast, for although there is nothing new in principle, yet there are some applications that will be distinctly novel to many readers. There are books dealing with graphical methods of computation, many of which are in daily use, and these are based mainly upon the use of parallel lines, and the intelligent reader will soon discover this property is freely used throughout this book. A chapter is devoted to the human figure, including two large-scale faces, also the hand, all of which may be reproduced by means of two set-squares—the 45 deg. and 60 deg.-30 deg.—used singly or together with the tee-square. The book will prove very interesting reading, and doubtless helpful to many draughtsmen.

Whitfield-street.—PREMISES.—New warehouse, etc., premises are to be erected at 58-60, for Messrs. George M. Whiley, Ltd., 54, Whitfield-street, W.1. Plans have been prepared by Mr. E. H. Abbott, F.R.I.B.A., 6, Warwick-court, Gray's Inn, W.C.

RATES OF WAGES IN THE BUILDING TRADE

[Every endeavour is made to ensure accuracy but we cannot be responsible for errors.]

	Masons.	Brick-layers.	Car-penters Joiners.	Plas-terers.	Slaters.	Plum-bers.	Pain-ters.	Lab-ourers.
Aberdare	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Accrington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Alfreton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Alnwick	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Altrincham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Ashford Kent	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Ashington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Ashton-under-Lyne	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Aylesbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Aylsham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Banbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Barnsley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Barnstaple	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Barrow-in-Furness	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Barry	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Basingstoke	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bath	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bedford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Berwick	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bexhill	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Birkenhead	1/10	1/10	1/10	1/11	1/10	1/10	1/9½	1/4½
Birmingham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bishop Auckland	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Blackburn	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Blackpool	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bolton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bournemouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bradford	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bradford-on-Avon	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Braintree	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Brentwood	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bridgwater	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bridlington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Brighton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bristol	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bromsgrove	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bromyard	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bungay	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Burnley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Burton-on-Trent	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bury	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Buxton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Cambridge	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Canterbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Cardiff	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Carlisle	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chatham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Chelmsford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Cheltenham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chesterfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chorley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Cirencester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Clacton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Colchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Coventry	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Cranbrook	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Crewe	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cromer	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Darlington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Deal	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Denbigh	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Derby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Devizes	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Dewsbury	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Doncaster	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Dorchester	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Dorking	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Dovercourt	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Driffield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Droitwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Dudley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Durham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Eastbourne	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
E. Glam. (Mon.Val.)	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ely	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Exeter	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/5½	1/2
Exmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Fakenham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Felixstowe	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Folkestone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Frome	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Glossop	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Gloucester	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Godalming	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Goole	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Gosport	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Grantham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Great Yarmouth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Grimsby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Guildford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Halifax	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Harpenden	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Harrogate	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Hartlepools	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Harwich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hastings	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hatfield	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hednesford	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Hereford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/4½	1/1½
Herne Bay	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Hertford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hitchin	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hoddesdon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Holt	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Huddersfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Hull	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Hunstanton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Huntingdon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Isle of Wight	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Ipswich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Keighley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Kettering	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kidderminster	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
King's Lynn	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Lancaster	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leamington Spa	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leeds	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leicester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leighton-Buzzard	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Lichfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Lincoln	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Littlehampton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Liverpool	1/10	1/10	1/10	1/11	1/10	1/10	1/9½	1/4½
Llandudno	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Llanelly	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
London:								
12 m. radius	1/9	1/9	1/9	1/9	1/9	1/9	1/8	1/4
12-15 m. radius	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/7½	1/3½
Loughborough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Lowestoft	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Luton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Macclesfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Maidstone	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Malvern	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Manchester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Mansfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Margate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Market Harb'rough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Matlock	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Melton Constable	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Melton Mowbray	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Merthyr Tydfil	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Middlesbrough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Newark	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Newbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Newcastle-on-Tyne	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Newcastle-ur-Lyme	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
New Forest	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newmarket	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newport, Mon.	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Northampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Norwich	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Nottingham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Nuneaton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Oakham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Oldham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Oxford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Paignton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Peterborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Plymouth	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2½
Pontypridd	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Portsmouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Preston	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Ramsgate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Reading	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Redcar	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Redditch	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Reigate	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Retford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ripon	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Rochdale	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Rochester	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Rugby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Saffron Walden	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
St. Albans	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
St. Helens	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Sawbridgeworth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Saxmundham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Scarborough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Sevenoaks	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Sheffield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Shrewsbury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sittingbourne	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Southampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Southend-on-Sea	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Southport	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
South Shields	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stevenage	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Stockport	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stockton-on-Tees	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stoke-on-Trent	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stourbridge	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stourport	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stowmarket	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Stratford-on-Avon	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stroud	1/5	1/5	1/5	1/5	1/5	1/5	1/4½	1/0½
Sunderland	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Swaffham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Swansea	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Swindon	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/4½	1/1½
Tamworth	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Taunton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Thetford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Torquay	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Totnes	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4	1/0½
Trowbridge	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Tunbridge Wells	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Uttoxeter	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wakefield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Walsall	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wallsend	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Warminster	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Warrington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Warwick	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Wells (Norfolk)	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Welwyn Gar. City	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
West Bromwich	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Weston-sup.-Mare	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Weymouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Whitby	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Wigan	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Winchester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Windsor	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wisbech	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Wolverhampton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Woodbridge	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Worcester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Worksop	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Worthing	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wrexham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wroxham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Wymondham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
York	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½

For rates of wages in the Building Trade in Scotland, see page 1007.

| Labourers. | | |

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A.; Surveyor, S.; Engineer, E.; Borough Architect, B.A.; Architect, A.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, ETC.

JUNE 11.

Birmingham.—Painting.—External and internal, at 16 branch libraries, for T.C. H. H. Humphries, City E. and S. Dep. £1 1s.

Bognor.—18 Flats.—Erection of, for the U.D.C. Surveyor, High-st. Dep. £2 2s.

Brighton.—Rebuilding.—Of Nos. 177 and 178, Western-rd., Brighton, for the B.C. Thomas Garrett & Son, F. & A.R.I.B.A., 34, Ship-st., Brighton. Dep. £1 1s.

Bury St. Edmund's.—Building.—New out-patients' department, at Hospital-rd, for West Suffolk General Hospital. Naish & Mitchell, A.R.I.B.A., 7, Hatter-st., Bury St. Edmund's. Dep. £2 2s.

Colwyn Bay.—Greenhouse.—At Bron-y-Nant, for U.D.C. W. J. Dunning, E. and S. Dep. £2 2s.

Croydon.—Houses.—Erection of 50 (56 Lettings) at Mitcham-rd. Estate, for the B.C. B.E., Town Hall, Croydon. Dep. £3 3s.

Glasgow.—Installation.—Of electric light at Luke's school annexe, Rose-st., for T.C. J. Clark, Director of Education. Dep. £1 1s.

Glasgow.—Schools.—Temporary schools at Millerston and Hamiltonhill, for E.C. J. Clark, Director of Education. Dep. £2 2s

Glasgow.—Painting.—Various schools, for E.C. J. Clark, Director of Education. Dep. 10s. 6d. each.

Glasgow.—Granolithic.—Granolithic work at 12 schools, for E.C. J. Clark, Director of Education Dep. £1 1s.

Gravesend.—School.—Elementary school at Ordnance-rd., to accommodate 1,180 children, for T.C. A., 5, Woodville-ter. Dep. £3 3s.

***Hammersmith.**—Tenements.—80 in one block at South-st., off King-st., for the B.C. of Hammersmith. Hugh Royle, T.C., Town Hall. Dep. £2.

Lanteglos-by-Fowey.—House.—At Bodinnick, Lanteglos-by-Fowey. T. S. Roseveare, Hall, Lanteglos-by-Fowey.

Liverpool.—Painting.—Internal and limewashing, etc., at certain elementary schools, for T.C. Land Steward and Surveyor.

London.—Painting.—External of administrative block at Central Baths, Finchley-rd., N.W.3, for Hampstead B.C. B.E.

Middlewich.—Houses.—48, on land adjoining Booth-lane, and construction of a new road and sewers, for T.C. F. W. Stocks, F.S.I.

Plymouth.—Alterations.—At Ker-st. school, Devonport, for E.C. W. H. May, F.R.I.B.A., 23, Lockyer-st.

Plymouth.—Repairs.—To premises at 5 and 6, Wyndham-st. West, Plymouth, for C.B. R. J. Fittall, T.C.

Rosehearty.—Houses.—Four, for T.C. Jenkins & Marr, C.E. and architects, 16, Bridge-st., Aberdeen.

Sleaford.—Redecorating.—At caretaker's house and also its house in Drove, for R.D.C. E. H. Sills, L.R.I.B.A., Northgate.

***Surrey.**—Alterations and Additions.—At the Farm Bailiff's house, Brookwood Mental Hospital, near Woking, for the Asylums Visiting Committee, County of Surrey. F. J. Hodgson, architect, 201, High-st., Guildford. Dep. £1 1s.

JUNE 12.

Bathgate.—Cottages.—For sluicekeeper's and shepherd's cottages, etc., at Lyne reservoir, for D.C. J. & A. Leslie & Reid, C.E., 72a, George-st., Edinburgh. Dep. £1.

Colchester.—Painting.—Certain Council and non-provided schools, for E.C. E. H. Bultitude, clerk, 3, Trinity-st.

Conisborough.—Installation.—Of electric lighting at Conisborough new middle school, for West Riding E.C. Education Department, County Hall, Wakefield.

Essex.—Elementary School.—At Little Thurrock, for the Essex C.C. Jno. Stuart, F.R.I.B.A., C.A., Springfield Old Court, Chelmsford. Dep. £1 1s., to F. H. Owers, Duke-st., Chelmsford.

Essex.—Elementary School.—At Rivenhall, Silver End, nr. Braintree, for the Essex C.C. Jno. Stuart, F.R.I.B.A., C.A., Springfield Old Court, Chelmsford. Dep. £2 2s., to F. H. Owers, Duke-st., Chelmsford.

Glasgow.—Garage.—Bus garage, Butterbiggins-rd., for T.C. General Manager, 46, Bath-st.

Glasshoughton.—Additions.—To school premises and erection of caretaker's house at Glasshoughton Ashton-rd., Council school, for West Riding E.C. Education Department, County Hall, Wakefield.

Gloucestershire.—Repairs.—Bitton Upton Council school, Downend C. of E. school, Kingswood High Street Council school, Kingswood Samuel White's Council school, Winterbourne Council school, for E.C. R. S. Phillips, F.R.I.B.A., County Education Architect. Dep. £2 2s.

Goole.—Painting.—Inside and outside of Secondary School buildings, and creosoting fences and gates to playing fields, for Governors. W. T. Silvester, Estcourt-chambers.

Gravesend.—Redecorations.—To 148 houses at King's Farm housing estate, for Corporation. B.E. and S., 5, Woodville-ter.

Guiseley.—Installation.—Of electric lighting at new school, for West Riding E.C. Education Department, County Hall, Wakefield.

Halifax.—Conversion.—Of West Ward Liberal Club into Public Billiards Hall and Dance Rooms. G. Reg. Oddy, architect and surveyor, Ward's End-chambers.

Matlock.—Public Shelter.—At Pleasure Grounds. Hall Leys, for Matlocks U.D.C. Joseph Turner, Town Hall.

Pontypridd.—School.—Girls' school at Hawthorn, Pontypridd, for accommodation of 280 children, for U.D.C. W. E. Lowe, S. Dep. £2.

St. Pancras. — Superstructure. — For block of dwellings at Ossulston-st., for the L.C.C. Architect to the Council, The County Hall (Room No 3), Westminster Bridge, S.E.1. Dep. £2.

Sheffield.—Houses.—100 non-parlour type on Longley estate, and 22 parlour type on Longley estate, for T.C. W. Geo. Davies, F.R.I.B.A., City Architect. Dep. £2.

Watford.—Cottages.—8 on Primrose Hill building site, Abbot's Langley, for R.D.C. Dep. £2.

West Riding.—Installation.—Low-pressure hot water, at (1) Conisborough new middle school, and (2) Bramley and Wickersley new school, for E.C. Education Department, County Hall, Wakefield.

JUNE 13.

Devonshire.—Repairs.—At various schools, for Devon Education Committee. County Architect's Office, 97, Heavitree-rd., Exeter.

East Ham.—Repairs, Painting and Sundry Works. —To various schools and public libraries, for the B.C. B.E., Town Hall, East Ham, E.6. Dep. 10s. in respect of each specification.

East Ham.—Wiring.—For electric lighting of Napier-rd. school, for C.B. Electrical Engineer. Dep. 10s.

Edinburgh.—Houses.—Transformer houses at Roseburn and Joppa, for T.C. E. J. MacRae, A.R.I.B.A., City Architect.

Gosport.—Building.—Engine-room, repair shop, duplicate dust arresters and a 150-ft. chimney shaft, in Council's Depot, Westfield-rd., for T.C. A. Barlow, B.E.

***Gravesend.**—Ward Block.—Completion of, in Bath-st., Gravesend, for the Management Committee, Gravesend and North Kent Hospital. The Secretary. Dep. £2 2s.

Hawksnest.—Building.—House, two new steadings, and adaptation of existing farm buildings, at Hawksnest Farm, near Galashiels, for Board of Agriculture. Chief Surveyor, Board of Agriculture for Scotland, York-buildings, Queen-st., Edinburgh. Dep. £1 1s.

Hendon.—Recreation Hall.—At Colindale Hospital, Colindale-av., Hendon, for the M.A.B. Office of the Board, Victoria Embankment, E.C.4. Dep. £1.

Larne.—Alterations.—In connection with conversion of Workhouse building into a district hospital, for B.G. J. A. Hanna, architect and civil engineer, 29, Wellington-place, Belfast. Dep. £2 2s.

Liverpool.—Houses.—Erection of 203 A.710 and A.760 type houses on the Fazakerley Hall estate, and 52 type B.950 houses on the Norris Green estate, for the Housing Committee. Acting Director of Housing, Municipal Buildings, Dale-st., Liverpool. Dep. £1 1s. for each of the estates mentioned.

London.—Cleaning and Painting.—At Brook Fever Hospital, Shooters Hill, S.E.18, for the M.A.B. Office of the Board, Victoria Embankment, E.C.4. Dep. £1.

Middleton.—Houses.—Lump sum tenders for the erection of 50 houses on Rhodes housing site, for the T.C. B.A., Town Hall, Middleton, Lancs. Dep. £2 2s.

Nottingham.—Painting.—Also cleaning various schools, for E.C. A. H. Whipple, Director of Education. Dep. £1.

Peterborough.—Houses.—54, on Mayor's Walk estate, for T.C. W. H. A. Court, City E. and S. Dep. £3 3s.

Port Talbot.—Wall.—Boundary wall for General Hospital, for District Hospital Committee. D. L. Evans, architect, Commercial-buildings.

Red Hill.—Telephone Exchange.—At Red Hill, for the Commissioners H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

Southampton.—Houses.—180, on Shirley Warren housing site, for C.B. B.S. Dep. £2 2s.

Stoke-on-Trent.—Repairs.—To 2 houses at Smallthorne, for T.C. E. B. Sharpley, Town Clerk.

Surrey and Kent.—Alterations and Extension.—1, alteration to stores, Downs Hospital, Sutton; 2, verandah extension and new milk store at Princess Mary's Hospital, Margate, for the M.A.B. Office of the Board, Embankment, E.C.4. Dep. £1 in respect of each work.

Various Places.—Cleaning, Painting and Repair Works.—At various hospitals and casual wards for the M.A.B. Office of the Board, Embankment, E.C.4. Dep. £1

JUNE 14.

Bootle.—Painting.—(a) Interiors of following schools:—(1) Christ Church school, (2) Bedford-rd. school, (3) St. Winefride's school, (4) Linacre school, (5) No. 2, Trinity-rd., (6) No. 4, Trinity-rd.; also exterior of following school:—(7) Balliol Council school. (b) Limewashing and tarring conveniences at the various schools, for C.B. B.E.

Bootle.—Partitions.—Supplying and fixing complete one sliding and folding partition in (a) Hawthorne-rd. school, (b) Bedford-rd. school, for C.B. J. Spencer Tumilty, T.C.

Devon.—Renovations.—To schools, as follows:—Bideford: East-the-Water; Clovelly; Filleigh; Castle Hill; Horwood and Newton Tracey; Marwood: Mortehoe: Woolacombe; Newton St. Cyres; Paignton: Curledge-st. girls; Whimple; Woolfardisworthy West, for E.C. C.A., 97, Heavitree-rd., Exeter.

Devon.—Houses.—One roadman's house at Blackawton Forces; Moorgate: North Bovey; Roborough: Bickleigh (S. Devon); Stokeinteignhead; Yealmbridge: Yealmpton, for C.C. C.A., 97, Heavitree-rd., Exeter.

Guildford.—Extension.—At the destructor works, Bellfields, for T.C. J. W. Hipwood, B.S.

Gunnersbury.—Conveniences.—In Gunnersbury-park, for Joint Committee. W. G. Cross, B.E., Municipal Offices, Acton, W.3. Dep. £1 1s.

Heston and Isleworth.—Houses.—Erection of 112 non-parlour type on the Marlborough Park estate in four contracts, for the U.D.C. J. G. Carey, Council House, Hounslow. Dep. £2 2s.

Liverpool.—Painting.—Interior (1) City Hospital North, Netherfield-rd., (2) City Hospital South, Grafton-st., (3) City Hospital East, Mill-lane, for T.C. Land Steward and Surveyor, Municipal-buildings, Liverpool.

Luton.—Hospital.—Smallpox hospital at Spittlesea Wood, Eaton Green-rd., for T.C. B.E., 18, Upper George-st. Dep. £1 1s.

***Romford.**—Section Headquarters.—311th Anti-Aircraft Searchlight Company, R.E., in Hornchurch-rd., Romford. The Secretary, Essex Territorial Army Assn., Market-rd., Chelmsford. Dep. £2 2s

Tottenham.—Entrance Gateway.—Formation of a new entrance gateway to the cemetery, in Church-rd., Tottenham, for the Burial Board. J. C. S. Mummery, architect, 34, Bloomsbury-sq., W.C.1.

Trowbridge.—Repairs.—Also renovations, etc., at various Council schools, for Wilts C.C. T. Walker, County Architect, Trowbridge.

Worthing.—Post Office and Telephone Exchange.—At Worthing, for the Commissioners H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

JUNE 15.

Edinburgh.—Building.—Small transformer house at Gogarburn, for the District Board of Control. Stewart Kaye, A.R.I.B.A., 14, Hill-st.

London.—Heating.—Warming, ventilating, hot and cold water supply, etc., at public baths and washhouses, Old Ford-rd., Bethnal Green, for Bethnal Green B.G. B.E. and S. Dep. £2 2s.

JUNE 16.

Batley.—Pointing.—At Grammar School. for Governors. Education Office.

Boston.—Repairs.—Also decorating interior and exterior of Primitive Methodist Chapel, West-st. G. Wander, 18, Sydney-st.

Bristol.—Painting.—Also colouring, etc., of certain schools, for T.C. W. Ludford Freeman, Director of Education. Dep. £1 1s.

Clutton.—Building.—Converting a disused building into a tramp ward, for B.G. S. J. Pierce, Farrington Gurney.

Edinburgh.—Demolition.—Of buildings at 70-77, Shore, Leith, for T.C. B.E.

Gayton.—Alterations to Gayton school, for managers Vicarage, Gayton.

Sheffield.—Stores.—Also workshops, Sheaf-st., for T.C. S. E. Fedden, general manager and engineer, Commercial-st. Dep. £1 1s.

West Suffolk.—Repairs.—New offices at Lakenheath Council school, and painting and repairs to following Council schools:—Assington, Beyton, Brockley, Fornham All Saints, Glemsford, Haverhill, Whixoe, Wickhambrook, Woolpit, and the Newmarket Technical Institute, for E.C. A. Ainsworth Hunt, C.A., 51a, Abbeygate-st., Bury St. Edmund's.

Widnes.—Houses.—100, 20 parlour type and 80 non-parlour, on Kingsway estate, for T.C. B.E. Dep. £2 2s.

JUNE 17.

Croydon.—Alterations.—To administrative block, Borough Hospital, Waddon, for T.C. B.S. Dep £1 1s.

JUNE 18.

Armagh.—Reconstruction.—Building and reconstruction of premises in William-st., Lurgan, for E.C. J. St. J. Phillips, B.E., 16, Donegall-sq. South, Belfast. Dep. £3 3s.

Bermondsey.—Block of Dwellings.—Erection of, at Dickens estate, Bermondsey, for the L.C.C. Architect to the Council, The County Hall (Room No. 3), Westminster Bridge, S.E.1. Dep. £2.

Bilston.—School.—In Loxdale-st., for E.C. Joynson Bros., F.R.I.B.A., Butcroft, Darlaston. Dep. £2 2s.

Bingley.—Renovations.—Interior at Bingley Training College, of College, Gymnasium Block, and "Acland" Hostel, for West Riding E.C. Education Department, County Hill, Wakefield.

Ealing.—Houses.—21 on land adjoining distributing station, Pope's-lane, for T.C. J. D. Knight, Borough Electrical Engineer and Manager.

Guildford.—Improvements.—Mass concrete river wall of approximate length of 210 feet in connection with Millmead Improvement, for T.C. J. W. Hipwood, B.E. and S.

Halifax. — Decorating. — At Friendly Trade Societies' Club, St. James's-rd. L. T. Wormald, Sec.

Kennoway.—Houses.—20, for Kirkcaldy D.C. G. B. Deas, architect, Central-chambers.

Kingston-upon-Thames. — Non-parlour type Houses.—Erection of 60, for the Royal B.C. B.S., Municipal Offices, Kingston-upon-Thames. Dep. £1 1s.

Lochore.—Houses.—16 3-roomed houses, for Kirkcaldy D.C. G. B. Deas, architect, Central-chambers, Kirkcaldy.

Lumphinnans.—Houses.—14 semi-detached cottages, for Kirkcaldy D.C. G. B. Deas, architect, Central-chambers.

Maltby.—Houses.—For (a) construction of roads, sewers, surface water drains, etc., (b) erection of 32 houses on Heron Field, Grange-lane, for U.D.C. E. and S.

Menston.—Plastering.—In connection with erection of operating theatre at Mental Hospital. H. Topham, Clerk to the Mental Hospitals Board Wakefield.

Northampton.—Conversion.—Of playshed into cookery centre, at Barry-rd. school, for C.B. A. Fidler, B.E. and S. Dep. £1 1s.

Ongar.—School.—Girls' open-air school at West Ham Residential Open-air School, Fyfield (near Ongar), for C.B. John H. Jacques, L.R.I.B.A., Architect to the Committee, 61, West Ham-lane, Stratford, E.15. Dep. £2.

Southend-on-Sea.—Cleaning.—Also painting at various Council schools, for E.C. F. W. Smith, architect to E.C. Dep. £1.

Wath-on-Dearne.—School.—New middle school (to accommodate 380 children) at Brampton Bierlow, near Wath-on-Dearne, for Educational Foundation of George Ellis (1711). C. F. Moxon, architect, 3, Regent-st., South Barnsley. Dep. £2 2s.

York.—Houses.—64 parlour type, adjoining Hull-rd., and 44 non-parlour type in Osbaldwick-lane, for T.C. F. W. Spurr, City E. Dep. £2 2s.

JUNE 19.

Bootle.—Building.—Following works at Infectious Diseases Hospital, Linacre-lane, Bootle: (1) Re-roofing pavilion No. 3 with corrugated asbestos sheeting; (2) providing and laying new floor to pavilion No. 3, for C.B. B.E.

Bootle.—Painting.—Also cleaning interiors of (1) Infectious Diseases Hospital, Linacre-lane; (2) Maternity Home, Balliol-rd.; (3) Corporation Sanatorium, Upfields Farm, Maghull, for C.B. B.E.

Bristol.—Conveniences.—At Alma-rd., Clifton; Lower Maudlin-st. and Old Market-st., Bristol, for T.C. L. S. McKenzie, City E. and S., 63, Queen-sq. Dep. £3 3s.

Dublin.—Houses.—8, at Griffith-av., Marino, for Corporation. City Architect.

***Hornsey.**—Repairs, Decorations and Tar Paving.—At the various Schools during summer holidays, for the E.C. A. W. Allen, Sec., Hornsey E.C. Office, 6, Topsfield-parade, Crouch End, N.8.

***Southall-Norwood.**—Cottages.—Erection of 44 on the brickfields site, for the U.D.C. J. B. Thomson, Housing Architect, Town Hall, Southall. Dep. £2 2s.

Stepney (E.).—Foundations and Retaining Walls, etc.—Construction of at Limehouse Electricity Generating Station, Narrow-st., E.14. Contract No. 304, for the B.C. B.E. and S., Bernard J. Belsher, Municipal Offices, Raine-st., E.1. Dep. £10 (Treasury Notes).

Swinford.—Reconstruction.—Of Swinford ex-R.I.C. Barracks, Co. Mayo, for Office of Public Works. T. Cassidy, secretary, Office of Public Works, Dublin. Dep. £1.

Walthamstow.—Interior and Exterior Renovation in Painting, Distempering, etc.—To various schools, for E.C. H. Prosser, F.R.I.B.A., 263, High-st., Walthamstow, E.17.

JUNE 20.

Hants.—Telephone Exchange.—At Farnborough, for the Commissioners H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

Leicester.—Demolition and Building Work.—Demolition of the existing central wing, and the erection of a new 4-story block, for the Board of Governors, Leicester Royal Infirmary. Pick, Everard, Keay & Gimson, 6, Millstone-lane, Leicester. Dep. £3 3s.

Liverpool.—Tenement Dwellings.—Erection of 46 on the Rankin-st. area, for the Housing Committee. Acting Director of Housing, Municipal Buildings, Dale-st., Liverpool. Dep. £1 1s.

Meelick.—Repairs.—Re-roofing and other repairs to Meelick Church, near Swinford, Co. Mayo. William H. Byrne & Son, architects, 20, Suffolk-st., Dublin.

JUNE 21.

***Carmarthenshire.**—Engine Shed, Coal Stage and other works, at Pantyffynnon, for the Directors of the G.W. Rly. Engineer, Paddington Station. Dep. £2 2s.

Monaghan.—House.—At Derrymaglagh, Carrickmacross, for Irish Sailors and Soldiers Land Trust. R. E. Beckerson, Chief Clerk, Irish Sailors and Soldiers Land Trust, Dublin. Dep. £2 2s.

Newtown (Montgomery).—Renovations, etc.—To various schools, for Montgomeryshire E.C. L. Phillips, director and clerk, County Education Offices.

JUNE 22.

Edinburgh.—Constructing.—Tunnel about 500 yds. long, under the foreshore and seabed of the Firth of Forth, together with a shaft on the land and a shaft in the sea, at Portobello, for Electricity Committee. J. & A. Leslie & Reid, C.E., 72a, George-st. Dep. £1.

***North Foreland.**—New Wireless Station.—At North Foreland, for the Commissioners. H.M.O.W., Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

JUNE 23.

Bristol.—Houses.—24, on St. Anne's housing site, for T.C. L. S. McKenzie, City E. and S., 51, Prince-st. Dep. £1.

***Chester.**—Secondary School.—To accommodate 320 scholars, for the Chester E.C. F. Anstead Browne, F.R.I.B.A., C.A., Newgate-st., Chester. Dep. £5 5s.

Chichester.—Nurses' Home.—At Royal West Sussex Hospital. Whitehead & Whitehead, architects, 18, South-st., Chichester.

Coleford.—Additions.—Alterations and additions to police station, for Gloucestershire C.C. E. S. Sinnot, C.S. Dep. £2 2s.

Haverfordwest.—Painting.—To various schools in county of Pembroke, for Pembrokeshire E.C. O. T. Thomas, County Architect, Haverfordwest.

JUNE 25.

Beddington and Wallington.—Houses.—8 brick-built houses in Wandle-rd., Beddington, for U.D.C. S. F. R. Carter, E. and S. Dep. £2 2s.

JUNE 26.

***Norwood.** — Telephone Exchange. — "Livingstone," Church-rd., Norwood, S.E., for the Commissioners H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

JUNE 27.

***East Ham.**—Alterations.—Conversion of playsheds at the Brampton school, East Ham, into class-rooms, for the B.C. B.E., Town Hall. Dep. £1 1s.

JUNE 28.

***Southampton.**—Medical Superintendent's House and Porter's Lodge.—Erection of, at the Mount, Bishopstoke, Sanatorioum, for the C.C. A. L. Roberts, F.R.I.B.A., C.A., The Castle, Winchester. Dep. £1 1s. by cheque payable to the Hants C.C. and crossed "Lloyds Bank, Ltd., Winchester."

Acton (W.3).—Redecorations and Repairs, Tar-paving, Central Heating.—At various schools, for the B.C. B.E., Municipal Offices, Acton, W.3. Dep. £1 1s., to Boro. Treas.

JUNE 30.

Islington.—Repairing and Painting.—Iron railings at the Public Gardens, also sewer ventilation shafts, for the Metro. Boro. Council of Islington. B.E., Mun.-bldgs., Upper-st.

Tredegar.—Additions.—Also alterations to Central Institute, which includes extension to present billiards room, with new caretaker's dwelling over, etc., for Workmen's Institute Society. W. Edgar Jones, architect, Rivoli, Park-row.

Wokingham.—Houses.—46, for R.D.C. C. Aldridge, A.B.S.A., Loddon Bridge, Earley, near Reading.

JULY 2.

London.—Tenements.—80 tenements in one block at South-st., off King-st., Hammersmith, for Hammersmith B.C. Streatfeild & Attwell, 13, New-sq., Lincoln's Inn, London, W.C.2. Dep. £2.

JULY 7.

Chelmsford.—New County Offices.—Erection of the first section to front King Edward's-av. and Threadneedle-st., Chelmsford, for the Essex C.C. Jno. Stuart, F.R.I.B.A., C.A., Springfield Old Court. Dep. £3 3s. to F. H. Owers, City Accountant, Duke-st., Chelmsford.

NO DATE.

Bradford.—Garage.—In Hammerton-st., for West Yorkshire Road Car Co., Ltd. A. P. Harrison, chartered architect, High Close, Keighley.

Dewsbury.—Heating.—Church of the Good Shepherd, Thornhill Edge. Parsonage, Thornhill Edge, Dewsbury.

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Goole.—Premises.—Club premises, for Goole branch of the British Legion. F. Turner, architect and surveyor.

Hereford.—Alterations.—To mills in Bath-st., for Committee of Hereford Flour Mills. Bettington & Son, architects, Palace-chambers.

Horsforth.—Decorating.—Interior of St. Margaret's Hall, Horsforth. J. H. Wood, 96, Town-st.

Keighley.—Wiring.—Electric wiring of 136 houses on Guard House estate, for T.C. Borough Architect.

London.—Jointless Flooring.—Laying of in several wards, etc., at the City-rd. Institution, 1a, Shepherdess-walk, City-rd., N.1, for the Guardians of the Holborn Union. Chas. J. Cross, Clerk, Admin. Offices, 53, Clerkenwell-rd., E.C.1.

Stockton-on-Tees.—Church.—Taking down a brick and stone church, and re-erection. H. D. Pritchett, architect, 12, High-row, Darlington.

Wakefield.—Schoolroom.—At Lofthouse Gate P.M. Church. W. Anderson, Canal-lane, Stanley.

Whittlesey.—Painting.—Also decorating United Methodist Chapel. E. Cox, 5, Gracious-st.

Worksop.—Additions.—To boot factory in Eastgate, for Worksop Co-operative Society, Ltd. J. Haslam, architect, Worksop. Dep. £2 2s.

MATERIALS, ETC.

JUNE 11.

Howth.—Road Materials.—For U.D.C. F. Higginbotham, S., 3, Clare-st.

Smethwick.—Builders' Materials.—For C.B. E. Hardiker, engineer and manager, Gas Works, Rabone-lane.

JUNE 12.

Dublin.—Paving.—200,000 creosoted deal paving blocks, 5 in. by 9 in. by 3 in., for C.B. G. J. Sherlock, T.C.

JUNE 15.

Durham.—Pipes.—Cast-iron pipes, for County Water Board. W. Read Ward, clerk, 25, Northgate, Darlington.

Ely.—Road Materials.—For U.D.C. G. A. J. Edmundson, S., 45, Silver-st.

JUNE 16.

Litherland.—Granite Chippings.—For U.D.C. G. Ponsford, E. and S.

NO DATE.

Chichester.—Pipes.—500 lin. yds. of 3-in. spigoted and socketed cast-iron pipes, for T.C. F. J. Lobley, City Engineer.

ENGINEERING, IRON AND STEEL.

JUNE 11.

Windermere.—Extension.—Five additional sludge lagoons and other appurtenant works at Tower Wood sewage works, for U.D.C. F. C. Needham, E. and S. Dep. £2 2s.

JUNE 12.

Manchester.—Pipework.—High and low pressure pipework, supports, etc., for steam-heating services (Specification No. 221), at City Power Station. H. C. Lamb, Electricity Dept., Town Hall. Dep. £1 1s.

JUNE 13.

Birmingham.—Bridge.—Completion of bridge over L.M. and S.R. at Hazelwell Station, Cartland-rd., King's Heath, for T.C. H. H. Humphries, M.Inst. C.E., City E. and S. Dep. £2.

JUNE 14.

Edinburgh.—Bridges.—Two, on new Glasgow to Edinburgh road, section F-G (Dechmont to Broxburn), for T.C. D. A. Donald, 271, Alexandra-parade, Glasgow, E.1. Dep. £3 3s.

St. Marylebone.—Demolition and reconstruction of concrete bridge.—In steel and concrete, over canal at Park Road, for the B.C. Sir E. Owen Williams, K.B.E., engineer, 5, St. George's-rd., Westminster, S.W.1. Dep. £5 5s.

JUNE 16.

Studley. — Widening.—Of Birmingham-Evesham main road at Studley, for Warwickshire C.C. D. H. Brown, C.S., 8, Northgate-st., Warwick. Dep. £2.

JUNE 18.

Reigate. — Improvements.—Reinforced concrete road bridge, and construction of approaches in connection therewith, at Shipley Bridge, Burstow, for R.D.C. W. J. Hatton, District Surveyor, 48, High-st. Dep. £3 3s.

JUNE 20.

Somerford.—Widening.—Of Somerford county bridge in mass concrete and masonry, together with roadwork on approaches, and other works, for Staffordshire C.C. R. S. Murt, C.S.

JUNE 21.

Coulsdon and Purley.—Reinforced Concrete Bridge.—Construction of and necessary road works at Foxley Hill-rd., Purley, for the U.D.C. Gilbert A. Ballard, O.B.E., A.M.I.C.E., 69, Brighton-rd., Purley, Surrey. Dep. £5 5s.

JUNE 22.

Dublin.—Steelwork.—112 tons of steelwork, for Gt. Southern Railway. J. F. Sides, chief engineer, Broadstone Station, Dublin.

JUNE 23.

Docking.—Tower.—Reinforced concrete water tower, about 1¼ mile of 4 in. and 3 in. water mains, with street fountains, hydrants, etc., for R.D.C. J. A. Stoughton, clerk. Dep. £1 1s.

JUNE 25.

Brigg.—Sewerage.—Construction of a 9-in. cast-iron sewage pipe line from pumping station at Gasworks to Sewage Disposal Works, for U.D.C. J. R. Oxenham, S. Dep. 10s. 6d.

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Irlam.—Reconstruction.—For (a) 160 yds. 3 ft. diameter concrete tube outfall sewer, and (b) detritus tanks, for U.D.C. E. and S. Dep. £3 3s.

JUNE 27.

Hackney.—Condensing Water Works.—Construction of intake and discharge chambers on the banks of the Lee Navigation, together with concrete intake and discharge pipe-lines, for the B.C. Boro. Electrical Engineer, 18-24, Lower Clapton-rd., E.5. Dep. £2 2s.

JUNE 30.

Barnsley.—Culvert.—Under L. and N.E.R. at Silkstone, for C.B. J. R. Fox, Waterworks Engineer. Dep. £3 3s.

JULY 26.

London.—Steelwork.—For India Store Department. Director-General, Belvedere-rd., S.E.1.

AUGUST 14.

Cairo.—Bridge.—Construction of metallic bridge over Nile at Benha. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Reference A.X. 6243.)

OCTOBER 1.

Copenhagen.—Bridge.—Highway and railway bridge across Lillebelt, for Danish State Railways. Chief of Department of Way and Works, Copenhagen or Danish Legation, London.

NO DATE.

Sleaford.—Rebuilding.—Also widening four bridges on road leading from North Kyme to Heckington, for R.D.C. N. D. Preston, S., 18, Northgate.

ROAD, SEWERAGE, AND WATER WORKS.

JUNE 11.

Bromley.—Making-up.—Of Sherman-rd., for T.C. B.E. Dep. £1.

Broxbourne.—Main.—Construction of water main in St. Michael's-rd. H. J. Jackson, Rye-rd., Hoddesdon.

***Bury St. Edmunds.**—New Out-Patients' Department.—At Hospital-rd., for the Reconstruction Committee of the West Suffolk General Hospital. Naish and Mitchell, A.R.I.B.A., 7, Hatter-st., Bury St. Edmunds. Dep. £2 2s.

Cavan.—Road.—Improving and resurfacing in tar bitumen macadam (1) trunk road through Cavan Urban District, and (2) portion of trunk road continuing towards Virginia, for C.C. C.S., Cavan.

Gateshead.—Kerbing.—Flagging, kerb and channel (1) Heathfield-rd. north side, (2) Enfield-rd. north side, part of (3) Windermere-st. West, north side, part of, for C.B. F. H. Patterson, B.E.

Glasgow.—Widening.—Also reconstruction of about 1½ miles of existing road between Harthill and Polkemmet, to form part of new road from Glasgow to Edinburgh, for Corporation. D. A. Donald, engineer, 271, Alexandra-parade, Glasgow, E.1. Dep. £3 3s.

Glasgow.—Making-up.—Portion of Carbeth-st., for T.C. D. Stenhouse, T.C.

Howth.—Main.—Extension of 3-in. water main at Evora-ter., for U.D.C. T.C.

Rathmines and Rathgar.—Asphalting.—Laying in Trinidad asphalt of Harold's Cross-rd. from Harold's Cross Bridge to the Township Boundary, for U.D.C. S.

Runcorn.—Main.—Cutting trenches and laying about 2,000 yds. lin. of 6 in. water main, for District Water Board. J. Wilding, Engineer to the Board, Town Hall.

Southampton.—Making-up.—Chatsworth-rd., for C.B. B.E. Dep. £1 1s.

Tendring.—Making-up.—King's-av., Little Holland, nr. Clacton-on-Sea, for R.D.C. F. G. Vincent-Brown, S. Dep. £2.

JUNE 12.

Armagh.—Sewer.—At Monaghan-rd., from end of town boundary, for R.D.C. H. C. Parkinson, engineer.

Barnes.—Reconstruction.—Of High-st., Mortlake (part of), and Lonsdale-rd., Barnes (part of), for U.D.C. F. P. Kindell, E. and S. Dep. £2 2s.

Barnes.—Road.—Reinforced road foundation works, etc., Church-rd., for U.D.C. F. P. Kindell, E. and S. Dep. £2 2s.

Down.—Reconstruction.—In two-coat asphalt macadam of portion of Newry-Warrenpoint-rd. (route A2), for C.C. J. G. Wilkin, C.S., Courthouse, Downpatrick.

Frinton-on-Sea.—Improvements.—Work in connection with improvement and widening at corner of Connaught-av. and Queen's-rd., for U.D.C. S.

London.—Paving.—Paving and forming roadway and footways of Embleton-rd., for Lewisham B.C. B.S.

London.—Roads, etc.—Repairing the carriageways and footways of various streets, with various materials for the Streets Committee of the Corporation of London. Office of the City Engineer, Portland House, Basinghall-st., E.C.2.

Newport.—Roads, Sewers and Houses.—(1) Roads and sewers on the Maesglas housing estate; (2) Erection of 232 houses thereon, for the Corporation. (1) B.E. (2) B.A., Town Hall, upon production of B. Treasurer's receipt for £2 2s dep. in either case.

Prescot.—Sewer.—Along College-rd., for U.D.C. F. A. Gregson, E. and S. Dep. £1 1s.

Sligo.—Gravel.—Supplying and laying of approx. 6,300 super yards bituminous gravel on footpaths, for Corporation. John Shea, T.C.

JUNE 13.

Belfast.—Sewer.—Disconnection of existing drains and for construction of about 332 lin. yds. of 6-in. glazed earthenware pipe sewer, together with manholes, disconnecting traps, and other works in connection in grounds of Balmoral Industrial School, for C.B. City S.

Birmingham.—Sewers.—1,010 yds. of brick and concrete and stoneware pipe sewers, together with manholes and other incidental works, between World's End-lane and Hagley-rd. West, Quinton, for T.C. H. H. Humphries, City E. and S. Dep. £2.

Birmingham.—Reconstruction.—Of Deakins-rd., Hay Mills, including carriageway, of tarred slag macadam on a concrete foundation, concrete flagged footways, and a length of new pennant kerb, for T.C. H. H. Humphries, City E. and S. Dep. £2.

Gower.—Water Supply.—For (1) 4,300 yds. of 4 inch cast-iron mains and their appendages, including all necessary valves and hydrants; (2) laying and jointing 4,300 yds. of 4 inch cast-iron mains and all other necessary works in connection with provision of a water supply for the Villages of Kittle and Southgate, in the Parish of Pennard, for R.D.C. T. Williams, C., 12, Christina-st., Swansea.

Middleton.—Street and Sewer Works.—Making and sewering, etc., of 4 streets in connection with Rhodes housing scheme, for the T.C. B.E., Town Hall, Middleton, Lancs.

Southampton.—Roads.—Construction of certain roads and sewers on housing site on north side of Burgess-rd., for C.B. B.E. Dep. £1 1s.

Twickenham.—Improvements.—To King-st., for T.C. F. W. Pearce, B.E. and S. Dep. £2 2s.

Watford.—Making-up.—King George's-av. and Sydney-rd. (part 3), for T.C. W. W. Newman, B.E. Dep. £2 2s.

Wrexham.—Making-up.—Of Maesydre-rd. and Penymaes-av., for Corporation. B.E.

JUNE 14.

Antrim.—Water Supply.—Laying of a 2-in. water main, erection of a catchment tank and supply and erection of a fountain in village of Templepatrick, for R.D.C. J. L. Clark, clerk.

East Ham.—Repairs.—Repairing and tar paving of playgrounds at Shrewsbury-rd. school, Forest Gate, High-st. school, East Ham, Dersingham school, Manor Park, Storey-st. school, North Woolwich, and the Technical College, for E.C. B.E. Dep. 10s

Heston and Isleworth.—Improvements.—Widening and sewering of Syon-lane for approximate length of 200 yds. in connection with Marlborough Park housing scheme, for U.D.C. J. G. Carey, A.M.Inst. C.E. Dep. £2 2s.

Heston and Isleworth.—Roads.—Four concrete roads on Marlborough Park estate, for U.D.C. J. G. Carey, engineer, Dep. £2 2s.

Huddersfield.—Culvert.—Providing and laying 9-in. and 18-in. diameter earthenware pipe sewers and 2-ft. diameter concrete tube culvert as follows:—(1) Jack Royd and Bumroyd, drainage, Newsome; (2) Whitehead-lane, sewer, Primrose Hill; (3) Weatherhill-rd., clean water culvert, for C.B. B.E. and S.

Reading.—Reconstruction.—Of Christchurch-rd. and Shinfield-rd., for C.B. B.S. Dep. £2 2s.

Witham.—Sewerage.—2,350 yds. of 15-in., 12-in. and 9-in. cast-iron and stoneware sewers, together with manholes and other works, and for certain alterations to sewage outfall works, for U.D.C. Pick, Everard, Keay & Gimson, engineers, 6, Millstone-lane, Leicester. Dep. £1 1s.

JUNE 15.

Feltham.—Sewerage.—Construction of about 19,300 lin. yds. of 12, 10, 9, 8, 7, and 6-in. cast-iron and stoneware pipes, with manholes, etc., and sewage disposal works consisting of sedimentation tanks, percolating filters, humus tanks, etc., for U.D.C. D. Balfour & Son, civil engineers, 18, Abingdon-st., S.W.1. Dep. £10.

Hatfield.—Sewer.—Laying of 634 yds. of 12 in. stoneware sewer with manholes, etc., at Hertford-rd., for R.D.C. H. T. Sidwell, S. Dep. £2 2s.

Hatfield.—Making up.—Of Endymion and Lothair-rds., for R.D.C. H. T. Sidwell, S. Dep. £2 2s.

West Bromwich.—Repairs.—To roads at district schools, Wigmore, for Walsall and West Bromwich School District. A. H. Ward, clerk, 22, Lambard-

JUNE 16.

***Elham.**—Tar Paving and Tar Dressing Paths and Yards.—At the Institution at Lyminge, for the Elham Union. Edward F. Webb, Clerk, 29, Bouverie-sq., Folkestone.

Wirral.—Making-up.—Of Overchurch-rd. and Birch-av., Upton, for R.D.C. S. H. Davies, Highways Surveyor, Brimsgate-rd., Heswall. Dep. £1 1s.

JUNE 18.

Connah's Quay.—Making-up.—Of Primrose-hill, Primrose-st., Princes-st. and Spring-st., for U.D.C. Williams & Clarke, civil engineers, 6, Godstall-chambers, Chester.

Erith.—Road.—Reinforced concrete carriageway in Pier-rd., for U.D.C. H. Hind, E. and S. Dep. £1.

***Greenwich.**—Pipe Sewer.—Construction of approx. 830 lin. ft. of 18in. pipe sewer and 380 lin. ft. of 12-in., on Charlton Park site, for the B.C. B.E.'s Dept., Town Hall, Greenwich. Dep. £2 2s.

Warminster.—Drain.—Surface-water drain at Boreham-rd. and providing necessary pipes and other materials, for U.D.C. F. J. Reilly, E. and S.

JUNE 19.

Holywell.—Pipes.—Laying and jointing in Parish of Llanasa of about 5½ miles of 3-in., 4-in. and 6-in. cast-iron pipes, together with valves and hydrants, and construction of a small covered collecting reservoir, for R.D.C. Dodd & Watson, engineers, County chambers, Corporation-st., Birmingham. Dep. £2.

Holywell.—Water Supply.—For (Contract No. 2), the R.D.C. Dodd & Watson, engineers, County-chambers, Corporation-st., Birmingham. Dep. £2.

Holywell.—Water Supply.—In Parish of Llanasa (Contract No. 3), for R.D.C. Dodd & Watson, engineers, County-chambers, Corporation-st., Birmingham. Dep. £2.

Sheppey.—Pipes.—Laying of about 160 lin. yds. of stoneware pipes, 12 in. diameter, and construction of three manholes, in ditch between warden waypost and Water-lane, construction of two gullies at roadside, and the filling-in of the ditch over pipes, for R.D.C. C. A. Till, S., "Bellevue," Seaside-av., Minster, near Sheerness.

South Kensington.—Re-drainage and Other Works.—To the forecourt of the Imperial Institute, for the Commissioners H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

Wealdstone.—Sewers.—Construction of certain roads and sewers on Elmgrove-rd. housing site, for U.D.C. H. Walker, S. Dep. £1 1s.

JUNE 20.

Cheadle and Gatley.—Drainage.—For (a) certain works of sewerage, surface-water draining and roadworks; (b) construction of paths, gates and fences in connection with 60 houses upon two sites, for U.D.C. S.

Hendon.—Making-up.—Of Whitchurch-gardens, Little Stanmore; The Drive, Edgware, and Woodhall-av., for R.D.C. H. W. Rackham, S. Dep. £1 1s. each.

JUNE 22.

Blackburn.—Asphalte.—Supplying and laying mastic asphalte in Lord-st., for C.B. H. M. Webb, Borough and Water Engineer.

JUNE 23.

Horsforth.—Making-up.—Of (1) Lee-lane; (2) Springfield-mount; (3) Springfield-cres.; (4) Back Low-lane; (5) Back Breary-av., for U.D.C. Jas. E. Aldersley, S. Dep. £1 1s.

JUNE 25.

Beddington and Wallington.—Sewerage.—700 ft. of 9 in. diameter stoneware pipe sewer, together with works appurtenant thereto, in waterlogged ground in bridle path, Beddington, for U.D.C. S. F. R. Carter, E. and S. Dep. £1 1s.

JUNE 26.

Barking Town.—Resurfacing.—Of Ripple-rd., between Westbury-rd. and the level-crossing, with approximately 3,600 sq. yds. of creosoted deal block paving on concrete foundation, for U.D.C. R. A. Lay, E. and S.

Leeds.—Road.—Covering of roadway with tar macadam at institution at Beckett-st., for B.G. J. H. Ford, Clerk to Guardians, 11, South-parade.

JUNE 28.

Barnet.—Sewerage.—Construction of sewers, manholes and sewage disposal works and various other works incidental thereto, at Shenley, for R.D.C. Bruges & Swayne, 1, Victoria-st., S.W.1. Dep. £5 5s.

JUNE 30.

Barnsley.—Improvements.—Back road off Chilton-st. and back road between School-st. and Cutty-lane, for C.B. B.E.

JULY 2.

Argyll.—Road.—Construction of first section of new Tyndrum-Ballachulish-rd., from Carnoch, through Glencoe, to vicinity of Kingshouse, for C.C. M. Sinclair, County Clerk, Lochgilphead. Dep. £3 3s.

JULY 11.

Chelmsford.—Making up.—Of (1) Finchley-av., (2) Old Court-rd., for T.C. E. J. Miles, B.E. and S. Dep. £1 1s.

"HENDERSON"

SLIDING DOOR GEAR

FOR FACTORIES, GARAGES, SCHOOLS, ETC.,

"TANGENT JUNIOR" FOR LIGHT DOORS
"TANGENT SENIOR" FOR HEAVY DOORS.

WRITE FOR BOUND CATALOGUE B.26 TO:-

P.C. HENDERSON, LIMITED.

TANGENT WORKS, BARKING, ESSEX.

Auction Sales, Tenders, etc.

JUNE 11 AND 12.

***Tring.**—W. Brown & Co. will sell at Ashridge Estate Yard, Little Gaddesden, cleft oak pales, oak butts, other timber and machinery, etc. Auctioneers, Tring.

JUNE 12.

Loudwater (Bucks).—Hampton & Sons, at 20, St. James's-sq., S.W.1, 69½ acres freehold building land. Auctioneers, as above.

JUNE 22.

Ilford.—John D. Wood & Co., and Kemsley, will sell as a whole or in three lots, at the London Auction Mart., 155, Queen Victoria-st., E.C.4., building estate, Mossford Green Farm and 27 cottages, Barkingside, Ilford, about 65 acres. Auctioneers, K., Broad-st. House, Old Broad-st., E.C.; J. D. W. and Co., 6, Mount-St., W.1.

JUNE 26.

Dorking.—Hampton & Sons, at 20, St. James's-sq., S.W.1, freehold, residential and building estate, "Sondes-place," over 29 acres. Vacant possession. Auctioneers, as above.

***London.**—Hampton & Sons, at the St. James' Estate Rooms, 20, St. James's-sq., two freehold building estates, remaining portions of the Wey Manor estate, West Weybridge, Surrey. Auc-

West Weybridge (Surrey).—Hampton & Sons, at 20, St. James's-sq., S.W.1, remaining portions of Wey Manor Estate, comprising 2 freehold building estates of about 33 and 138 acres respectively. Auctioneers, as above.

JUNE 27.

***Bucks.**—Golbie and Green will sell in lots at the Town Hall, Chesham, building and accomodation lands about 26 acres, Chesham Bois estate. Auctioneers, 9, Bruton-st., W.1.

London.—John D. Wood & Co. & Kemsleys (acting in conjunction) at the London Auction Mart, 115, Queen Victoria-st., E.C.4, building estate, Mosaford Green Farm, Barkingside, Essex, together with 27 cottages, farm house and premises. Auctioneers, K., Broad-st. House, E.C.2. J. D. W. & Co., 6, Mount-st., W.1.

JULY 3.

Near Ickenham.—Hampton & Sons, at 20, St. James's-sq., S.W.1, 4,000 feet freehold frontage land. Auctioneers, as above.

Public Appointments.

JUNE 13.

Brighton.—Works Foreman and Superintendent. —Of workmen (including caretakers) for superintendence of repairs to school buildings required by the E.C. F. Herbert Toyne, sec., 54, Old Steine, Brighton.

JUNE 14.

***Egypt.**—Assistant Professor of Architectural Composition, Design and Perspective, required by the Egyptian Ministry of Education. The Director, Egyptian Edu. Office, 39, Victoria-st., S.W.1.

***Guildford.**—Clerk of Works on the proposed new public elementary school at Bellfields, by the E.C. The Sec., E.C., Park-st., Guildford.

Southampton. — Assistant Quantity Surveyor (Grade I.6) required in the County Architect's Department, by the C.C. A. L. Roberts, F.R.I.B.A., C.A., The Castle, Winchester.

***Southend-on-Sea.**—Architectural Assistant in the Borough Engineer's Dept. required by the C.B. Robert H. Dyer, B.E., Municipal Buildings.

JUNE 20.

London.—Assistant Surveyors required on the permanent pensionable establishment of the Works and Buildings Directorate, Air Ministry. Secretary, Air Ministry, Adastral House, Kingsway, W.C.2.

JUNE 22.

***London.**—Lecturer in Building Construction, Building Materials and Builders' Quantities required at the Polytechnic, Regent-st., W.1. Director of Education, as above.

JUNE 23.

***Insein.**—Building Inspector at the Government Technical Institute required by the Government of Burma. The Secretary to the High Commissioner for India, General Dept., 42, Grosvenor-gardens, S.W.1.

JULY 12.

London.—Assistant Examiners in the Patent Office. Forthcoming examinaiton. The Secretary, Civil Service Commission, Burlington-gardens, W.1.

"A History of Architecture."

A Spanish publisher, Señor Canosa, of Barcelona, has just issued the first volumes of a complete translation of Sir Banister Fletcher's "History of Architecture on the Comparative Method," of which the eighth English edition has just appeared. This work has already been translated into Russian, and at the present time negotiations are taking place for the production of a French edition.

PROPOSED NEW BUILDINGS & OTHER WORKS*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.A.B. for Metropolitan Asylums Board; and M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A.; Surveyor, S.; Engineer, E.; Borough Architect, B.A.; Architect, A.

Alford.—Lindsey C.C. propose to erect school for senior children, at £8,000. Existing boys' school is to be remodelled, at £1,250.

Armfield Plain.—New church is to be erected for Parish of Aidarin.

Ashtead.—Plans approved by Epsom R.D.S., six bungalows, West Farm-av., for A. H. Daniels

Baghill.—Pontefract T.C. received sanction from B. of E. to proceed with Council school to accommodate 500 children, at £19,927.

Baldock (Herts).—Full Fashioned Hosiery Co., Ltd., 20, Copthall-av., E.C., have acquired large premises adjoining L.N.E.R. which are to be considerably altered and extended for factory purposes. Architect, Cecil H. Simpson, F.R.I.B.A., 83, Buckingham Palace-rd., S.W.1.

Banstead.—Plans been approved for 20 cottages at Banstead Downs by Epsom R.D.C., for Southern Railway.

Barnstaple.—Contract been placed for first portion of scheme for enlargement of Newport Parish Church.

Barry.—Extensive repairs to Eastern jetty at Barry Docks basin entrance are to be carried out, for G.W.R.

Beddington and Wallington.—R.D.C. passed plans:—24 houses, Raleigh-av., for Austin & Routledge, Demesne-rd.; pair of houses with garages in Onslow-gardens, for Baldwin & Sons (Croydon), Ltd.

Bermondsey.—Offices.—The Bermondsey Borough Council has approved the application of Messrs. Telling Bros., Ltd., 62-64, Raymouth-rd., for the erection of offices at the Arches, 62-64, Raymouth-rd.

Blackpool.—T.C. passed plans:—3 houses, Colville-av., J. Midgley; 2 houses, Cavendish-av., J. Ridyard; 4 houses, Calder-rd., C. & C. Hilton; 6 houses, Mather-st., R. B. Mather; 2 houses, Portland-av., T. Foster; 8 houses, Selby-av., T. Harding & Son; 62 houses, Sawley-av., B. Smith; 13 houses, Bloomfield-rd., A. Nuttall; 2 houses and shops, Waterloo-rd., J. Gregson & Son; 3 houses, Burn-grove, W. Townson & Son; 2 bungalows, Sunny Bank-av., J. Ridyard; 3 houses, Chislehurst-av., Heap & Mellor; 6 houses, Squires Gate-lane, R. Holt; 2 bungalows, Wilson-av., H. G. Mason; 3 houses, Watson-rd., Abson Bros.; 17 houses, Park-rd., Fletcher & Murdock; 4 houses, Rosebank-av., A. Fletcher; 7 houses, Boardman-av., Hornby Building Co.; house and shops, Whitegate-drive, Dr. & Mrs. Bradley; 7 houses, Gorse-rd., J. W. Clarkson; 2 houses, Windermere and Ullswater-rds., J. Marsden; 2 houses, Ryson-av., J. Cheers & Co., Ltd.; electricity sub-station, health offices, Tramways and Electricity Committee; Sunday school, Reads-rd., Swedenborg Church Trustees; refuse disposal works, Bristol-av., Cleansing Committee.

Blofield.—R.D.C. are to build six pairs of houses at Strumpshaw, four pairs of cottages and six bungalows at Blofield, and at Reedham three pairs of bungalows and four pairs of cottages.

Braintree.—R.D.C. reported that negotiations were proceeding for building sites at Bocking.

Bridgwater.—R.D.C. are to seek sanction to erection of 28 houses.

Burton-on-Trent.—Corporation propose to erect conveniences in Bridge-st., at £2,000.

Caerphilly.—Re-lining in brickwork of a portion of Caerphilly tunnel, been sanctioned by G.W.R.

Cardiff.—G.W.R. approved partial reconstruction of West Wharf-rd. bridge, Cardiff (General) station.

Chelmsford.—T.C. are to obtain a site for public library.

Chorley.—T.C. passed plans, for C. G. Froom, 8 cottages, Blackburn-st. and Parochial Schools, alterations, boys' department.

Coventry.—Housing Committee recommend erection of 304 houses on certain partly developed sites, at £12,050.—Corporation's new sewerage and sewage disposal scheme, which is estimated to cost £226,000, been considered by City Council. Application is to be made to M.H. for sanction.

Derby.—M.H. held inquiry into application by T.C. for sanction to borrow £87,000 for purpose of erecting public baths in Queen-st.

Dublin.—Following plans for new buildings and works of reconstruction been approved of by H. T. O'Rourke, City Architect:—9, Lurgan-st., alterations, Irish Church Mission; 10-11, Bective-terr., two houses, W. C. Bowen; Conyngham-rd., tramcar sheds, Dublin United Tramway Co.; Malahide-rd., two houses, J. Picton Bradshaw; James's-st., addition, St. Patrick's Hospital; 15a, Millmount-av., Drumcondra grain store, P. Geraghty.

Easington.—Plan passed by R.D.C. cinema in Cotsford-lane, Horden, for Horden Theatres, Ltd.

Eccles.—T.C. passed plans for 7 garages in Cambridge-grove, for C. Taylor.

Edmonton.—U.D.C. is to consider question of erecting more houses at Hyde Estate. Engineer prepare scheme for building on west side of Hazelbury-rd.

Exeter.—Sub-Committee of the Devon C.C. been appointed to consider provision of further accommodation at Castle.

Finchley.—U.D.C. recommended surveyor to prepare plans and estimates for erection of houses:—Queen's-rd. extension, 2; Goodyear's land, Squires-lane, 27; Manor cottages, 15; and Summers-lane glebe land, 20.

Great Bookham.—Epsom R.D.C. passed plans:—Rebuilding "Crown" public house, for Hodgkins (Kingston) Brewery Co.

Guildford.—Montague Burton, Ltd., tailors, Leeds, have bought site in the High-st. for branch shop and showrooms. Company's architect is H. Wilson, Roundhays.—T.C. are to have electricity showroom at corn exchange.

Herne Bay.—U.D.C. is to make application for sanction to £1,280 for pier shelters.

Hornsey.—Cranley-gardens bridge is to be widened at £4,250.—E.C. recommends spray baths at Campsbourne school, at £750.

Killarney.—U.D.C. been notified of proposal to build 24 houses at Kilcoolaght.

Kingsbury.—District Council passed plans:—98 houses in Meadowbank-rd., for Mr. Higinbotham; 18 houses in Ridgeway-close, 38 houses in Larkway-close, 4 houses in Wakeman's Hill-av., and 28 houses in another rd., for R. & J. Pritchard; 6 houses at junction of Mount-drive with Forty-lane, for C. W. B. Simmonds, Ltd.; shop and premises, 8, The Parade, Edgware-rd., for J. Sainsbury, Ltd.; 6 houses at Wakeman's Hill-av., for H. J. Morris & Co.

Kinsley.—P. A. Hinchliffe, of Barnsley, prepared plans for new vicarage at Fitzwilliam, for Vicar of Kinsley. Tenders are to be invited.

Leeds.—Committee has been appointed with respect to plan of Health Committee of combined public urinal and tramway shelter proposed at junction of Whingate and Tong-rd.—T.C. agreed to transfer to Libraries and Arts and Property Committees land on Cross Gates housing estate for building branch library and baths.—Plan for erection of 153 type A.3 houses on Middleton housing estate for re-housing of persons displaced by carrying out of street works authorised by the Leeds Corporation Act, 1927, been approved.—City Engineer submitted plans showing proposed re-arrangement of Central Lending Library and alterations to the lighting arrangements, and Council resolved that scheme be approved at £428. Tenders are to obtained.—M.H. sanctioned borrowing of following sums—£2,625 for purchase of land, £30,500 for road works, and £6,830 for bridge works in connection with construction of portion of Ring-rd. from Elland-rd. to Dewsbury-rd.; £2,233 for surfacing of footways, etc., in Roman-ave., and £140,000 for housing purposes.—City Engineer is also to obtain tenders for painting interiors of Armley and York-rd. libraries.—Tenders are to be invited for erection of 50 houses on portion of the Henconner-lane housing estate, Bramley, nearest to Henconner-lane.—Plan submitted by City Engineer of combined urinal and tramway shelter proposed to be erected at Cross Gates been approved.—Subject to approval of M.H. land on York-rd. and Selby-rd. housing estate is to be transferred to E.C., for erection of school.—Plans and estimate of cost of provision of branch library for Hunslet district on site at junction of Branch Church-st., Waterloo-rd. and Chapel-walk submitted by City Engineer have been approved.—Plans passed:—Purdy & Son, 4 houses, Stainburn-cres., Moortown; J. Craven, 4 houses, Gipton Wood-av., Harehills; A. Kellett, 12 houses, Kellett-lane and Road, Lower Wortley; A. Stabler, 4 houses, Vesper-rd., Kirkstall; M. Bristow, 18 houses, Wensley-drive, Chapel Allerton; R. Battersby & Sons, 4 houses, Roundhay Mount, Harehills; A. Booth, 22 houses, Parkside estate, Dewsbury-rd.; F. Reddyhoff & Son, 4 houses, Gipton Wood-rd., Harehills; A. Smith, 8 houses, Armley Grange-view, Armley Grange estate; J. Craven, 4 houses, Gipton Wood-av., Harehills; G. A. Smith, 4 houses, Mavis-lane, Cookridge Village estate; Bailey Brothers, 6 houses, Upland-cres., Harehills; R. Umpleby, 4 houses, Stainburn-cres., Moortown; J. Ambler, 4 houses, Gipton Wood-place, Harehills; E. Lolley, 4 houses, Stainburn-cres., Moortown.

Leyton.—T.C. passed plans:—W. S. Trent, alterations and additions to "King Harold" public-house, High-rd., Leyton; Beard Bros., 8 lock-up garages at Grove Green-rd.; J. & J. Dean, alterations and additions to workshop and lavatories at Dean's Yard, Knotts Green-rd.; G. R. Stonley, 4 houses, Chesterfield-rd.

Little Bookham.—Epsom R.D.C. received approval of M.H. to borrowing £4,679 required for Little Bookham housing scheme.

Liverpool.—T.C. are to spend £500,000 on street improvements.—Extensive repairs to roof of Stanley Dock depot been passed by G.W.R.

Lofthouse (Yorks).—Tenders are to be invited for schoolroom adjoining Primitive Methodist Chapel.

London (Bermondsey).—Property costing £30,000 has been bought for an extension to Bermondsey Market.—B.C. passed plans:—A. H. Foster, garage,

* See also our List of Contracts, Competitions, etc.

23, Union-rd.; Rev. T. C. L. Miller, 46, Grange-rd., additional class rooms, etc., St. Luke's Parochial Hall, Alfred-st.

London (Clapham).—Science laboratory is to be added to Clapham L.C.C. Central School.

London (Hammersmith).—Strengthening of bridge carrying the Ealing and Shepherd's Bush line over Ducane-rd., East Acton, been approved by G.W.R.

London (Muswell Hill).—New library is to be built.

London (Wimbledon).—B.C. passed plans:—R. J. & J. S. Thomson, addition of servants' bedrooms, west of existing buildings of Wimbledon Hospital, Tharstan-rd.; A. J. Elliston & Sons, alterations at billiard hall, 51a, Wimbledon Hill-rd.

London (Woolwich).—B.C. received report from M.H., stating that, subject to L.C.C. being prepared to sanction necessary loan, Minister agrees to acceptance of tender submitted by F. Ling & Sons for 30 houses on Eltham estate.—Plans passed:—E. H. Wright, 1-3, Powis-st., Woolwich (on behalf of P. Brooker), 10 garages, Sandy Hill-rd., Plumstead; A. C. Davidson, 9, Brent-rd., Plumstead, shops and 5 garages, 42, Burrage-rd., Plumstead; H. J. Skidmore, Estate Department, Hay's Wharf, Ltd., Tooley-st., S.E.1, sports pavilion, at Footscray-rd., Eltham; C. & D. J. Barwell, Estate Office, Southwood-rd., Eltham, 16 houses and 5 garages, 17 to 47, Larchwood-rd., Eltham.

Lymm (Cheshire).—Alterations are to be made at Spreadeagle Hotel for Groves & Whitalls, Salford.

Maidstone.—T.C. passed plans:—Hackney-rd., 2 houses, for T. G. Large; College-rd., 4 houses, for Clarke & Epps; Lower Stone-st., additional lavatory accommodation at Stone House, for Kent C.C.—R.D.C. passed plans for sports pavilion for Loose Bowling Club, for C. Walter, 8, Upper Stone-st., Maidstone.

Menheniot.—G.W.R. are to repair piers and abutments of Coldrennick viaduct, near Menheniot.

Morden.—Roman Catholic school for 400 children is to be built.

Mortlake.—Mortlake licensing justices approved plans of alterations at Queen's Arms, Mortlake.

Newcastle.—M.H. sanctioned loan of £406,000 to Corporation, for erection of working-class dwellings.—A garden city is proposed on land adjoining Chillingham Park, North Heaton. Plans by Marshall & Tweedy, architects, 54, Grey-st.

Newry.—Newry No. 1 R.D.C. decided to apply to Ministry of Home Affairs for sanction to a loan of £25,737, for erection of 69 labourers' cottages.

Norristhorpe.—C. A. Hall is architect for proposed extensions to Congregational Church. Tenders are to be invited.

Northampton.—B.E. is to obtain tenders for construction of footbridge over river, and also bridge suitable to carry light traffic, at Baulmsholme.—Plans passed:—3 combined houses and shops, Harborough-rd., J. Dunkley; 2 houses, The Drive, A. Glenn & Sons; 4 houses, The Drive, Walker & Perrett; 3 lock-up garages, with workshop and store over, rear the Gables, Wellingborough-rd., E. H. Tibbs; 4 houses and 2 motor houses, The Vale, Lack & Revitt.

Northolt.—New public-house, to be called the "Swan," is to be erected at £8,000. Plans by F. J. Fisher & Son, 38, Bloomsbury-sq., W.C.

Northwood.—Northwood and Pinner Hospital is to be extended at £10,000.

Plymouth.—C.B. resolved that B.S. be instructed to invite tenders for carrying out works of extension to bathing houses at Tinside.—Application of the Electricity and Street Lighting Committee for substation at Houndiscombe-rd. grounds been approved.—M.H. sanctioned £108,205 for erection of 267 houses at North Prospect.—Provision of low-pressure hot-water heating system in the Engineering depot shops at North-rd. been sanctioned by G.W.R.

Raynes Park.—Sites have been bought at Raynes Park for a secondary school and an elementary school.

Redcar.—Plans for a new theatre been approved by T.C. Buildings will include a ballroom, cafe and garages. T. Thompson, of Redcar, is in charge of the scheme.

Richmond (Dublin).—Richmond Asylum Joint Committee has under consideration a scheme which provides for extension of male hospital at Grangegorman (£4,400); conversion of unoccupied buildings, North Dublin Union, into accommodation for 243 patients (£22,550); new building for 128 patients, as an extension of No. 6 male division, Grangegorman (£23,000).

Rugby.—R.D.C. adopted a recommendation from Housing Committee for new building scheme for erection of 50 more houses in district.

Salford.—City Council approved proposal of Health Committee to borrow £2,900 to cover cost of provision of Venereal Diseases Treatment Centre at 153 and 155, Regent-rd.

Sanderstead.—A bridge is to be built in Sanderstead for light railway from Orpington to Sanderstead.

Seaham Harbour.—U.D.C. decided to build another 50 houses on Carr House estate.

Sidmouth.—Subscribers of Cottage Hospital agreed to approve a recommendation by the Buildings Sub-Committee to enlarge the present hospital for accommodation of 24 beds, at £10,000.

Smallburgh.—R.D.C. obtained site at Horning for erection of houses.

Smethwick.—B.E. is to proceed with erection of 78 houses on Church-rd. and 52 houses on Thimble-mill-rd.—Plans and specification of proposed Central School clinic on Firs estate been prepared by B.E. and S. and forwarded to B. of E. for sanction.—Council resolved that scheme "B," providing for 224 houses, be approved.—Fencing work, at £1,797, is to be carried out at Holly Lodge High Schools.—Plans passed:—14 houses, Hugh-rd., for "Excelda" Housing Society; 2 houses, Devonshire-rd., and 4 houses, Hugh-rd., for "Excelda" Housing Society; 6 houses, Woodlands-rd., for F. V. Arter; 4 houses, Woodlands-rd., for J. Reece; 14 shops, Thimblemill-rd., for S. Davis; new offices and showrooms, High-st., for Shropshire, Worcestershire & Staffordshire Electric Power Co.

Southall.—New hospital is to be erected at £10,000.

Stanmore.—The King Edward's Hospital Fund has approved plans for further ward of 56 beds at Royal National Orthopædic Hospital at Brockley Hill. Cost will be about £12,000. Architect, R. M. Pigott, F.R.I.B.A., 44, Bedford-row, W.C.

Stow.—Parochial Church Council of the Parish Church propose carrying out restoration work, at £2,000.

Sunderland.—Extensions are proposed to premises of Blackett & Sons, Ltd., Union-st.

Totnes.—Reconstruction in steelwork of two timber underbridges near Penmaenpool, and an underbridge near Totnes, been sanction by G.W.R.

Treorchy.—G.W.R. sanctioned reconstruction and widening of Treorchy station bridge.

Twickenham.—Plans passed by T.C.:—W. T. Pugh, 6 houses, Chudleigh-rd.; P. Hoffman, 3 houses and 2 garages, Orford-gardens and Bonser-rd.; F. N. Kemp & Son, 6 houses, Cross Deep-gardens; L. A. Stewart, 4 houses, Nelson-rd.—T.C. agreed to advertise for tenders for 4 non-parlour houses in Prospect-cres., Whitton.—Proposals for 6 houses in Chudleigh-rd. been approved.—Inquiry been held by M.H. into application of T.C. for sanction to borrow £5,500 for purchase of Brandon's Putney Brewery premises at Cole Bridge for central depot.

Tynemouth.—Plans passed:—6 semi-detached houses, Hawkey's-lane (Ingleside estate), by A. K. Tasker, for Ball Bros.; 3 self-contained houses, Dene estate, by W. Stockdale, for W. Bower; 2 semi-detached houses, The Broadway, St. George's estate, Cullercoats, by J. R. Wallace, for C. Brannen; 4 semi-detached bungalows, Billy Mill-lane, by F. R. N. Haswell and Son, for D. & J. W. Brannen; 8 semi-detached houses, Hatherton-av., St. George's estate, by J. R. Wallace, for Beautyman & Gray; 18 semi-detached houses, Newton-av., by J. R. Wallace, for H. D. Burton, Ltd.; 14 semi-detached houses, Newton-av., Cullercoats, by J. R. Wallace, for H.D. Burton, Ltd.—B.E. is to obtain tenders for erection of convenience at Lotus House grounds for Corporation.

Wakefield.—R.D.C. propose to erect additional 12 houses at Warmfield. The B.G. instructed W. H. Watson to prepare plans for pavilion to accommodate 80 patients, and a nurses' hostel for 60.

Waltham Abbey.—Council received M.H. sanction to loan of £1,100 for purpose of purchasing land at Crooked Mile, in respect of proposed housing scheme.—Plans passed: Grand stand at King's Oak, High Beech; 4 cottages at Marsh Hill, Holyfield, for Enfield Highway Co-operative Society.

Weston-super-Mare.—Improvements are to be carried out at the railway station, for G.W.R.

York.—M.H. held inquiry into application of City Council for sanction to borrow £26,300 for extensions to City Fever Hospital.

TESTING THE AIR OF LIVING ROOMS

AN ingenious apparatus for testing the air of rooms has been exhibited at the Hammersmith Town Hall. It formed a part of the Health Exhibition conducted by this municipality, and had been specially devised by the Gas Light and Coke Co. in order to demonstrate the care taken in examining the effects of gas fires before issuing them to the public. The portion of a room shown fitted with a gas fire is remarkably well-arranged, and no pipes are visible. One instrument measures the heating value of the gas. Others connected to a swinging arm gauge the heat intensity at various distances from the fire. A highly sensitive wind vane records on a dial the amount of stale air which the fire is drawing from the room and forcing up the chimney. Such tests are in practice supplemented by chemical analysis of the air.

Another method adopted is to introduce an impurity into the gas, which if escaping into the room would instantly become visible. No vestige of it appears, however, the gas fire being an extraordinarily good natural ventilator of the room. All waste gases are "personally conducted" by the draught heat up the flue. Even the quality of the heat is tested, and some interesting diagrams and photographs are shown illustrating the work constantly proceeding at the company's laboratories. The concentration of so much scientific thought and experiment on the problem of the efficient and hygienic provision of gas for heating and cooking is revolutionising town life. In the near future, visitors to London will not have to complain that they cannot see the place for the smoke. Elderly people and invalids need no longer expose themselves to the risk of colds and pneumonia on the bleak moorland or seashore. They can go into an ordinary London sitting-room, turn on the gas fire to get the right temperature, and enjoy the full advantage of "fresh air."

Apparatus for Testing Air in Rooms.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 5 6
Second Hard Stocks	3 19 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at King's Cross	2 12 3	Best Blue Pressed Staffs	9 5 0
Do., grooved for Plaster	2 14 3	Do. Bullnose	9 15 0
Do., Bullnose	3 6 3	Blue Wire Cuts	7 5 0

Best Stourbridge Fire Brick :—
2½ in. ..... 8 11 0 3 in. 10 3 0

GLAZED BRICKS—

Best White Ivory, and Salt Glazed Stretchers	21 0 0	D'ble Str'tch'rs	29 10 0
		D'ble Headers	26 10 0
Headers	20 10 0	One Side and two Ends	30 10 0
Quoins, Bullnose and 4½ in. Flats	27 10 0	Two Sides and one End	31 10 0
		Splays, and Squints	28 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.

Delivered London.

	s. d.		s. d.
2 in. per yd. super.	1 11	3 in per yd. super	2 9
2½ in. ,, ,,	2 4	4 in. ,, ,,	3 6

	s. d.	
Thames Ballast	10 6 per yd.	delivered 2 miles radius Paddington.
Pit Sand	13 9 ,, ,,	
Thames Sand	14 6 ,, ,,	
Best Washed Sand	14 6 ,, ,,	
½ in. Shingle for Ferro-Concrete	12 9 ,, ,,	
¾ in.	14 0 ,, ,,	
1½ in. Broken Brick	11 6 ,, ,,	
Pan Breeze	8 0 ,, ,,	

Per ton delivered in London area in full van loads.

Best Portland Cement. British. Standard Specification. Test £2 13 0 to £2 15 0 40s. alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	0 10 0
Super Cement (Waterproof)	4 3 0
Roman Cement	8 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
,, ,, Pink	5 10 0
Plaster, Coarse, Pink	3 0 0
,, ,, White	3 12 6
,, Fine	5 12 0
Strapite, Coarse	3 9 0
,, Finish	3 17 0
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	1 17 6
Hair per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months carr. pd.

Stourbridge Fireclay in s'cks 37s. 0d. per ton at rly. dp.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube ..... s. d. 2 10

BEER STONE—RANDOM BLOCK—
Free on rail at Seaton Station, per ft. cube 2 3
Delivered free on rail Nine Elms, S.R. per ft. cube 3 1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.

PORTLAND STONE.—
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube 4 4½
Do. do. delivered on road wagons at above stations, per ft. cube 4 5½
White basebed, 3d. per ft. cube extra.

NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE.—
Delivered at any Goods Station, London. s. d.
Random blocks from 10 ft. and over P. ft. cb. 17 0
Sawn two sides ,, 27 0
Sawn three or four sides ,, 32 0

YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station, London.
6 in. sawn two sides landings to sizes (under 30 ft. super) ..... Per ft. super 5 6
6 in. rubbed two sides, ditto ..... ,, 6 0
3 in. sawn two sides slabs (random sizes) ,, 2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) ,, 1 6½
1½ in. to 2 in. ditto, ditto ,, 1 3½

HARD YORK—
Delivered at any Goods Station, London.
Scappled random blocks ..... Per ft. cube 6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) ..... Per ft. super 5 1½
6 in. rubbed two sides, ditto ..... ,, 6 1½
4 in. sawn two sides slabs (random sizes) ,, 2 1½
3 in. ditto ditto ,, 2 10
2 in. self-faced random flags ..... Per yd. super 8 8

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 0d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£30 0	3 × 6	£21 0
4 × 9	26 0	3 × 11	25 0
4 × 8	25 0	2 × 11	26 0
4 × 7	23 0	3 × 9	24 0
3 × 8	22 0	2½ × 9	24 0
3 × 7	22 0	3 × 4½	21 0
2½ × 7	21 0	3 × 4	21 0

PLANED BOARDS.

1 × 11	£30 0	1 × 9	£28 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
⅝	18/-	1¼	30/-
⅞	21/-	1½	34/-
1	24/-		

TONGUED AND GROOVED FLOORING

Inches.	per sq.
1	24/-
1¼	30/-
1½	34/-

MATCHING (BEST).

Inches.	per sq.
⅝	16/6
¾	19/-
1	24/-

Ins. BATTENS.	s. d.	SAWN LATHS.	s. d.
¾ × 2 ..... per 100 ft.	2 6	Per bundle	2 6

1" AND UP THICK.

	£ s. d.	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 16 0	to 0 18 0
Dry American and/or Japanese Figured Oak, ft. cube	0 14 0	to 0 15 0
Dry American and/or Japanese Plain Oak, ft. cube	0 10 0	to 0 13 0
Dry sq. edged Honduras Mahogany, ft. cube	0 15 0	to 0 18 0
Dry Log cut Honduras Mahogany, ft. cube	0 16 0	to 1 1 0
Dry Cuba Mahogany, ft. cube	1 1 0	to 1 10 0
Dry Teak, ft. cube	0 13 0	to 0 15 0
Dry American Whitewood, ft. cube	0 10 0	to 0 14 0
Best Scotch Glue, per cwt.	4 10 0	to —
Liquid Glue, per cwt.	4 7 0	to 5 10 0

SLATES

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000.

	£ s. d.		£ s. d.
24 by 12	32 18 4	18 by 10	18 12 11
22 by 12	29 17 11	18 by 9	16 9 2
22 by 11	27 14 2	16 by 10	15 12 6
20 by 12	26 5 0	16 by 8	12 3 9
20 by 10	22 10 0		

TILES.

Delivered at London rate stations in full truckloads of not less than 6 tons.

	Per 1,000, f.o.r. London.
Best machine-made tiles from Broseley or Staffordshire district	5 7 6
ditto hand-made ditto	5 17 6
Ornamental ditto	6 2 6
Hip and valley tiles (per dozen) { Hand-made	0 9 6
{ Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

	£ s. d.
R.S. Joists, cut and fitted	12 10 0
Plain Compound Girders	14 10 0
Stanchions	16 10 0
In Roof Work	19 10 0

MILD STEEL ROUNDS.—To London Station, per ton

Diameter.	£ s. d.	Diameter.	£ s. d.
½ in.	12 0 0	⅝ in. to ⅞ in.	10 15 0
⅜ in.	11 0 0	1 in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Tubes. Wrought Mild Steel.	Tubes. Genuine Staffs. Iron.	Fittings. ½ in. and under.	Fittings. Over ½ in.	Flanges. ½ in. and under.	Flanges. Over ½ in.
	%	%	%	%	%	%
Gas	67½	50	42½	45	52½	55
Water	63½	46½	37½	40	47½	50
Steam	60	42½	32½	35	42½	45
Galv. gas	55	37½	32½	35	42½	45
Galv. water	50	32½	27½	30	37½	40
Galv. steam	45	27½	22½	25	32½	35

C.I.—HALF-ROUND GUTTERS—London Prices ex Works

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/3½	11½d.	3½d.
3½ in.	1/4½	1/1½	3½d.
4 in.	1/6	1/3	3½d.
4½ in.	1/7½	1/4½	4½d.
5 in.	1/10½	1/6½	5½d.

O.G. GUTTERS.

3 in.	1/8	1/4½	3½d.
3½ in.	1/8	1/4½	3½d.
4 in.	1/9½	1/4½	3½d.
4½ in.	1/11½	1/7½	4½d.
5 in.	2/4½	1/10½	5½d.

RAIN-WATER PIPES, &c.

Per yd. in 6 ft.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in. plain	1/10½	1/3	1/9½
2½ in. ,,	2/0½	1/4½	2/1½
3 in. ,,	2/6	1/9	2/7½
3½ in. ,,	2/11½	2/0½	3/0½
4 in. ,,	3/5	2/6½	3/8½

L.C.C. COATED SOIL PIPES—London Prices ex Works.

	Pipe. s. d.	Bends, stock angles. s. d.	Branches, stock angles. s. d.
2 in. per yd. in 6 fts. plain	3 3	2 4½	2 10
2½ in. ,,	3 9	2 7½	3 7
3 in. ,,	4 6	2 10	4 2½
3½ in. ,,	4 11½	3 7	4 11½
4 in. ,,	5 5½	4 0½	5 9

L.C.C. COATED DRAIN PIPES—London Prices ex Works

	Pipe. s. d.	Bends, stock angles. s. d.	Branches, stock angles. s. d.
3 in. per yd. in 9ft. lengths	4 4	5 1	8 0½
4 in. ,, ,,	4 10	5 8	10 0
5 in. ,, ,,	6 6	10 10	17 1
6 in. ,, ,,	8 6	13 2	21 9

Gasken for jointing, 38/6 per cwt.

	Per ton in London. £ s. d.		£ s. d.
IRON— Common bars	13 0 0	to	14 10 0
Staffordshire Crown Bars— Good merchant quality	14 5 0	to	15 15 0
Staffordshire Marked Bars	16 5 0	...	17 5 0
Mild Steel Bars	10 0 0	...	11 0 0
Steel Bars, Ferro-Concrete quality, basis price	10 0 0	...	11 0 0
Hoop iron, basis price	12 0 0	...	13 0 0
,, Galvanised	27 0 0	...	28 0 0
Soft Steel Sheets, Black— Ordinary sizes, to 20 g.	13 5 0	...	14 5 0
,, ,, ,, 24 g.	14 5 0	...	15 5 0
,, ,, ,, 26 g.	16 5 0	...	17 5 0
Sheets Flat Best Soft Steel, C.R. and C.A. quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0	...	16 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	16 10 0	...	17 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	18 10 0	...	20 10 0

No. 1 quality £4 per ton extra.

Flat and Galvanised Corrugated Sheets— Ordinary sizes, 6 ft. to 9 ft. to 20 g.	18 0 0	...	19 0 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	18 10 0	...	19 10 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	21 10 0	...	22 10 0
Sheets Galvanised Flat, Best quality— Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	22 0 0	...	23 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	24 0 0	...	26 0 0
Best Soft Steel Sheets, 26 g.	25 10 0	...	26 10 0
Cut Nails, 3 in. to 6 in.	19 0 0		

(Under 3 in. usual trade extras.)

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet, English, 4 lb. and up	29 0 0
Pipe in coils	29 10 0
Soil pipe	32 10 0
Compo pipe	33 10 0
Oil lead, ex London area, at Mills ..... per ton	19 5 0

NOTE.—Country delivery, 20s. per ton extra; lots under 3 cwt. 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 5s. cwt. extra.

COPPER.

	s. d.
Seamless Copper tubes (basis) per lb.	1 1
Strong sheet ,,	1 0
Thin ,,	1 1
Copper nails ,,	2 3
Copper wire ,,	2 4

PLUMBERS' BRASS WORK.
Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	11/-	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

	1¼ in.	1½ in.	2 in.	3 in.
8 lbs. P. traps	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps	35/-	45/-	66/-	126/- ,,

TIN.—English Ingots, 3/1 per lb. SOLDER.—Plumber's 1/3, Tinmen's 1/6, Blowpipe 1/7 per lb.

PAINTS, &c.

			s. d.
Raw Linseed Oil, in pipes	per gallon		0 2 11
,, ,, ,,	in barrels	,,	0 3 1
,, ,, ,,	in drums	,,	0 3 3
Boiled ,, ,,	in barrels	,,	0 3 3
,, ,, ,,	in drums	,,	0 3 6
Turpentine	in barrels	,,	0 3 11½
,,	in drums (10 gals)	,,	0 4 1½
Genuine Ground English White Lead, per ton'			51 0 0

(In not less than 5-cwt. casks.)

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*)

PAINTS, &c. (*contd.*)

		£	s.	d.
GENUINE WHITE LEAD PAINT—"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J," Brand, and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	69	10	0
Red Lead, Dry (packages extra)..	per ton	39	10	0
Best Linseed Oil Putty	per cwt.	0	15	0
Filicol	,,	0	15	6
Size. XD quality	ftkn.	0	3	6

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per ft.		Per ft.
15 oz. fourths ..	2½d.	32 oz. fourths	6½d.
15 ,, thirds ..	3½d.	32 ,, thirds	8½d.
21 ,, fourths ..	3½d.	Obscured Sheet, 15 oz.	3½d.
21 ,, thirds ..	4½d.	,, 21 ,,	4½d.
26 ,, fourths	4½d.	Fluted 15oz.6½d.,21oz.	9d.
26 ,, thirds ..	6½d.	En'lled 15 oz.4½d.,21oz.6½d.	

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per ft.
⅛ Rolled plate	4½d.
⅛ Rough rolled	5½d.
¼ Rough rolled	5½d.
Figured Rolled, Baltic, Oceanic, Arctic Stippolyte, and small and large Flemish White	5½d.
Ditto, tinted	8½d.
Rolled Sheet	4½d.
White Rolled Cathedral	4½d.
Tinted do.	6½d.

Cast plate is same price as rough rolled.

VARNISHES, &c.

		Per Gallon £	s.	d.
Oak Varnish	Outside	0	14	0
Fine ditto	ditto	0	16	0
Fine Copal	ditto	0	18	0
Pale Copal	ditto	1	0	0
Pale Copal Carriage	ditto	1	4	0
Best ditto	ditto	1	12	0
Floor Varnish	Inside	0	18	0
Fine Pale Paper	ditto	0	18	0
Fine Copal Cabinet	ditto	1	2	6
Fine Copal Flatting	ditto	1	0	6
Hard Drying Oak	ditto	0	18	0
Fine Hard Drying Oak	ditto	0	19	0
Fine Copal Varnish	ditto	1	0	0
Pale ditto	ditto	1	2	0
Best ditto	ditto	1	12	0
Best Japan Gold Size		0	12	6
Best Black Japan		0	10	6
Oak and Mahogany Stain (water)		0	12	0
Brunswick Black		0	7	6
Berlin Black		0	14	6
Knotting (patent)		1	5	0
French and Brush Polish		0	17	0
Liquid Dryers in Terebine		0	9	0
Cuirass Black Enamel		0	7	0

A Builder's Estate.

Mr. Solomon Holt, of 364, Dickenson Road, Longsight, Manchester, retired builder. Net personalty, £15,562, left £44,201.

Southern Building Trades' Employers.

The half-yearly general meetings of the Southern Counties Federation of Building Trades' Employers will take place at Guildford on June 12 and 13, 1928.

Visit to Cement Works.

On Thursday, May 31, 70 members of the Manchester and District Clerks of Works and Building Foremen's Association paid a visit to Messrs. G. & T. Earle's Cement Works at Wilmington, Hull. After luncheon at the City Hotel, Hull (presided over by Mr. G. F. Earle), the party proceeded to the Wilmington Works and inspected the whole process of cement manufacture, six guides being detailed to take round parties of twelve. After tea, over which Mr. McLean Gibson presided, Mr. H. E. Kirkham (Vice-President of the Association) proposed a vote of thanks to Messrs. Earles for their kindness in inviting members of the Association to visit their works and for the splendid manner in which they had been entertained. Mr. W. Wadsworth and Mr. C. Matthews ably supported the vote of thanks. Mr. McLean Gibson, on behalf of Messrs Earles, thanked the Association and remarked that it was a pleasure to entertain a party of practical men who were constantly in touch with the use of cement. Afterwards a demonstration of the "Slump Test" was given.

THE SCOTTISH BUILDER

NEW BUILDINGS IN SCOTLAND

Dundee.—HOUSING.—The Housing Committee of Dundee Town Council has agreed to recommend that 223 tenement houses should be built on a site at Wester Clepington estate, which was recently acquired by the Corporation.

Airdrie.—SCHOOL.—The Airdrie Dean of Guild Court has passed plans presented by the Education Authority of Lanark for the erection of a new school on the site of the present Albert School, to accommodate about 700 pupils. The cost is estimated at £17,000.

Elgin.—HOUSES.—The Elgin Town Council decided to borrow £7,210 for an extension of the municipal housing scheme at Braemoriston. Twenty-four houses are to be built.

Dundee.—BUILDINGS.—Plans and sections of the following proposed new buildings, etc., have been lodged at the office of the City Engineer:—Bellfield-street — picture house for Mr. Arthur Henderson (Mr. Frank Thomson, architect, 11, Nethergate); Broughty Ferry-road—latrines, for directors of Dundee Orphan Institution (Mr. James Findlay, architect, 33, Albert-square); Clepington-road — shops for Mr. W. M. Patrick; Crescent-street—latrines for Dundee Education Authority; James-street—garages for David Stewart's Trustees (Messrs. Gordon & Scrymgeour, architects, 39, High-street); Jedburgh-road—villas for Mr. Charles Gray; Logie-street — picture house for Messrs. A. E. Binnall & Sons (Messrs. Allan & Friskin, architects, 26, Castle-street); and Strathmartine-road—additions for Dundee Education Authority.

Glasgow.—FACTORY.—A recommendation is to be placed before the quarterly meeting of the Scottish Co-operative Wholesale Society that a new cabinet factory be erected on ground adjoining Shieldhall Works, Glasgow, at an estimated cost of £90,000.

Kirkcaldy.—HOUSES.—The Kirkcaldy District Committee are inviting tenders for 20 houses at Kenonway; 14 houses at Lumphinnans; and 16 at Lochore. Mr. George B. Deas, of Central-chambers, Kirkcaldy, is the architect.

Glasgow.—BUILDINGS.—Plans for the erection of buildings, which are estimated to cost fully £300,000, have been sanctioned by the meeting of Glasgow Dean of Guild Court. Of that sum, approximately £175,000 is in respect of 306 Corporation houses of the two-apartment type, and 106 of four apartments at Knightswood; while £90,000 is for the Incorporated Glasgow Dental Hospital at 201, Renfrew-street. The other linings granted included the building of a garage to house 100 Corporation buses at Butterbiggins-road, which is estimated to cost £40,000; the erection of a new church and halls in Beaconsfield-road for the congregation of St. John's and Renfield-street U.F. Church; and a Masonic hall at Shettlestone-road for Lodge Eastmuir, No. 1126.

Aberdeen.—HOUSES.—Plans for nine new houses have been passed by the Plans and Sewerage Committee of the Aberdeen Town Council. The erection will cost a total of £8,709. The committee also passed plans for 35 other buildings or alterations, involving an estimated outlay of £12,126.

Edinburgh.—BUILDINGS.—The Edinburgh Dean of Guild Court has approved the following warrants:—Mr. Thomas Wallace Beach—villa, garage, and shed at Corstorphine Bank-drive; Mr. James Duff—hall and house at Saughtonhall-drive; Mrs. Marion M'Laren—four villas at Sydney-terrace; Messrs. Milne's Meters, Ltd.—brass foundry at Milton-street; North Richmond-street U.F. Church Trustees—alterations at North Richmond-street.

BUILDING TRADE WAGES IN SCOTLAND.*

THE following are the present rate of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers—Masons'‡ Bricklayers'‡ Plasterers'†
Aberdeen	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Airdrie	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Alexandria	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Arbroath	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/5½	1/1
Ayr	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2½
Bathgate	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2 to 1/3
Blairgowrie	1/7	1/7	1/7	1/7½	1/5	1/7	1/4	10d. to 1/-
Bo'ness	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Coatbridge	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Dumbarton	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Dumfries	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/6½	1/2
Dundee	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3 †1/2½
Dunfermline	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	‡1/2½ †1/2½
Edinburgh	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3½ †1/2½
Falkirk	1/7½	1/7½	1/7	1/8	1/7	1/7	1/6½	1/2½
Fort William	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2
Galashiels	1/6½	1/7	1/6½	1/7	1/6½	1/6½	1/7	1/2
Glasgow	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Greenock	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	1/2½
Hamilton	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Hawick	1/7	1/7	1/7	1/7-1/7½	1/7	1/7	1/7	1/2½
Helensburgh	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	1/2½
Inverness	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/- to 1/2
Kilmarnock	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Kirkcaldy	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Kirkwall	1/5	1/5	1/4	1/5	1/5	1/4	1/4	1/-
Lanark	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Leith	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3½ †1/2½
Motherwell	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Perth	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Stirling	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Stirlingshire (Eastern District)	1/7½	1/9	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Wishaw	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 1000.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	0
Add if in clay	,, ,,	1	0
Add for every additional depth of 6 ft.	,, ,,	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	,, ,,	1	0

CONCRETOR.

Portland cement concrete in foundation 1 to 6	per yard cube	38	0
Add if in underpinning in short lengths	,, ,,	7	0
Add if in floors 6 in. thick	,, ,,	3	3
Add if in beams	,, ,,	3	9
Add if aggregate 1 : 2 : 4	,, ,,	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	,, ,,	2	6

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	32	0	0
Add if in stocks	,,	7	10	0
Add if in Staffordshire blues	,,	22	0	0
Add if in Portland cement and sand	,,	1	10	0

FACINGS.

Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1¼

POINTING.

Neat flat struck or weathered joint	,, ,,	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork :—				
Fair external in half brick rings	,, ,,	0	0	10
Axed in stocks	,, ,,	0	1	9
Rubbed and gauged jointed in putty camber or segmental	,, ,,	0	6	0

SUNDRIES.

Damp course in double course of slates breaking joint and bedded in Portland cement	,, ,,	0	1	6
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	,,	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	,, ,,	9	6
Three-quarter-inch on flats in two thicknesses	,, ,,	6	3
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	,, ,,	1	2

MASON.

York stone templates fixed	per foot cube	13	0
York stone sills fixed	,, ,,	22	0
Bath stone and all labour fixed	,, ,,	10	6
Beer stone and all labour fixed	,, ,,	15	0
Portland stone fixed	,, ,,	20	0

SLATER.

Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	,,	80	9
Do. 24 in. × 12 in. Do. Do.	,,	90	0

CARPENTER AND JOINER.

Fir framed in plates	per foot cube	5	0
Do. joists	,, ,,	5	6
Do. roofs, floors and partitions	,, ,,	6	0
Do. trusses	,, ,,	8	6

		¾″	1″	1¼″	2″
Deal rough close boarding	per sq.	35/6	40/–	45/–	72/–

Flat centering for concrete floor, including struts or hangers	,,	50	0	
Do. to beams	per ft. sup.	0	11	
Centre for arches	,,	1	6	
Gutter boards and bearers	,,	1	0	

FLOORING.

		¾″	1″	1¼″	1½″
Deal-edges shot	per sq.	—	44/6	53/–	60/6
Do. tongued and grooved	,,	—	49/–	57/6	65/–
Do. matchings	,,	45/–	51/–	—	—
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/–	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	,, ,,	2	1
Add for fitting and fixing	,, ,,	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights ; average size	,, ,,	3	9

DOORS.

		1¼″	1¾″	2″
Two-panel square framed	per ft. sup.	2/1	2/4	2/6
Four-panel Do.	,,	2/5	2/8	2/11
Two-panel moulded both sides	,,	2/8	2/11	3/2
Four-panel Do. Do.	,,	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1″	1¼″	1½″
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	,,	1/4	1/6	1/9
Add if cross-tongued	,,	2d.	2d.	2d.

STAIRCASES.

	1″	1¼″	1½″	2″	2½″
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/–	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail : average, 3 in. × 3 in.	,, ,,	6	0
Add if ramped	,, ,,	12	0
Add if wreathed	,, ,,	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	16	3
Plain compound girders	,,	19	0
Do. stanchions	,,	21	9
In roofwork	,,	27	6

RAIN-WATER GOODS.

		3″	4″	5″	6″
Half-round plain rebated joints	ft. run	1/6	1/9	2/–	2/6
Ogee Do. Do.	,,	1/9	2/–	2/6	3/3
Rain-water pipes with ears	,,	1/9	2/7	—	—
Extra for shoes and bends	each	4/4	5/11	—	—
Do. stopped ends	,,	1/11	2/4½	3/7	4/–
Do. nozzles for inlets	,,	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	42	0
Do. Do. in flats	,,	41	0
Extra labour and solder in coated cesspools	each	6	9
Welf joint	per ft. run	0	6
Soldered seam	,, ,,	1	3
Copper nailing	,, ,,	0	3

		½″	¾″	1″	1½″	2″	4″
Drawn lead waste	per ft. run	1/2	1/9	2/–	3/4	4/–	—
Do. service	,,	1/8	2/2	2/7	3/10	—	—
Do. soil	,,	—	—	—	—	—	6/9
Bends in lead pipe	each	—	—	—	—	3/3	8/2
Soldered stop ends	,,	1/2	1/8	2/1	2/10	3/6	—
Read lead joints	,,	11d.	1/–	1/3	1/11	2/4	4/10
Wiped soldered joints	,,	2/10	3/6	4/–	4/11	6/6	9/9
Lead traps and cleaning screws	,,	—	—	—	14/7	19/6	—
Bib cocks and joints	,,	6/4	9/7	15/4	41/–	—	—
Stop cocks and joints	,,	15/4	17/2	25/8	64/–	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	6
Do. Do. Sirapite	,, ,,	2	9
Do. Do. Keen's	,, ,,	4	0
Add saw lathing	,, ,,	1	7
Add metal lathing	,, ,,	2	6
(Not including hangers or runners, etc., for suspended ceilings.)			
Portland cement screed	,, ,,	2	2
Do. plain face	,, ,,	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	6

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	8½
26-oz. Do.	,, ,,	1	0
Obscured sheet	,, ,,	1	1
⅛-in. rolled plate	,, ,,	0	9
¼-in. rough rolled or cast plate	,, ,,	0	10½
¼-in. wired cast plate	,, ,,	1	4

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	,, ,,	0	7
Plain painting, 1 coat	,, ,,	0	9
Do. 2 coats	,, ,,	1	2
Do. 3 coats	,, ,,	1	9
Do. 4 coats	,, ,,	2	4
Graining	,, ,,	2	3
Varnishing twice	,, ,,	1	9
Sizing	,, ,,	0	3
Flatting	,, ,,	0	7
Enamel	,, ,,	1	1
Wax polishing	per foot sup.	0	6
French polishing	,, ,,	1	2
Preparing for and hanging paper	per piece, 2/– to 4/–		

* These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TRADE NEWS

Steel Shutters.

Messrs. E. Pollard and Co., Ltd., St. John's Street, E.C.1, have issued a catalogue of their "Rolador" steel shuttering. This shutter is entirely different from any other in that it has a new type of lath of double thickness, while a special method of perfectly balancing weight has been introduced. In this catalogue will be found full details of the construction of the entire shutter, fully illustrating its very many improvements. All parts of the "Rolador" are thoroughly tested before leaving the works, and Messrs Pollards are always ready to send erecting engineers to any part of the country to superintend erection. A section has also been included in the book for wood lath shutters and blinds, in consideration of their allied nature and possible interest. "Rolador" is a name to be remembered, and the catalogue a booklet to be got.

Fans, Apparatus, Plants and Systems.

Under this title Messrs. Sturtevant Engineering Co., Ltd., of 147, Queen Victoria-street, E.C.4, have issued a booklet, No. 1235, which gives a résumé of the company's productions. Fans and ventilating apparatus for uses ranging from ships and mines to planing mill fans and general factory plants and systems of ventilation are all catalogued. Drying plants and dust-collecting apparatus all find place, and, indeed, all factory ventilating systems are very fully dealt with. This is a booklet of which every engineer and architect should have a copy. It will be found indispensable.

Builders' Stock Selections.

A well-bound, handy sized catalogue (No. 10) has been issued by Messrs. Young & Marten, Ltd., of Stratford, E., containing full particulars of stock selections for the building and allied trades. Illustrations, specifications, and prices of every style of builders' or builders' merchants' goods and ironmongery are given, and the catalogue, in short, will be of great use to all those who are required to give a price on the spot for work in contemplation.

Structural Steelwork.

Messrs. Redpath, Brown & Co., Ltd., of Edinburgh, London, Manchester, Glasgow, and Birmingham have issued a beautifully produced handbook of structural steelwork that for the engineer and contractor would seem to be a *sine qua non*. The revision of the British Standard Steel Sections for structural purposes, recently recommended by the British Engineering Standards Association, has necessitated this 1928 edition of the handbook containing data relating to these revised sections. The special features of the previous handbook are retained in this edition. These features include:—a very extensive range of compound girders and pillars of various types; dimensions, properties, and safe loads for all sections presented on two facing pages; safe loads on pillars both by the Moncrieff and by the London County Council pillar formulæ; and copious explanatory notes. All the calculations have been made by the firm's technical department, who acknowledge with thanks the permission of the British Engineering Standards Association to print and use, as far as applicable, the properties of the British Standard Sections, and also that of the Institution of Structural Engineers to print the floor load recommendations. Everyone connected with the use of structural steelwork will find this book of use and advantage.

Travelling Radiator Exhibit.

The motor travelling caravan of the National Radiator Co., Ltd., of Hull, fitted with a working "Ideal Cookanheat" installation, will demonstrate as follows:—June 11, Quarryette Pavilion, Aberystwith; June 13 and 14, outside the Picture House, White Lion-street, Tenby; June 15, Market-place, Carmarthen.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him next week not later than Tuesday evening.

- * Denotes *accepted*.
- † Denotes *provisionally accepted*.
- ‡ Denotes *recommended for acceptance*.
- § Denotes *accepted subject to modifications*.

Aberdeen.—New glasshouses at the Duthie Park, for the T.C.:—
‡R. Stewart, Broughty Ferry £3,808

Athy.—Improvements at the County Home, for the Kildare Co. Health Board:—
D. T. Carbury, Athy £2,995
*Dwyer & Fogarty, Thurles 2,761

Bailieborough.—Reconstruction of the court-house:—
*T. Martin £1,995

Bristol.—Painting and repairs, etc., at the Guardians' Homes for Children, at The Crescent, Downend, for the B.G.:—

R. Wilkins & Sons, Ltd.	£1,475 0
James Watts	558 0
E. Walters & Sons	746 0
H. C. Wakefield & Sons	840 0
F. G. Sage	915 10
Daniel Organ	651 10
A. D. Turner	730 0
*F. W. Payne	476 16

(All of Bristol.)

Cardiff.—Warehouse and garage, for the Associated Biscuit Manufacturers at Pengam:—
*E. Turner & Sons, Cardiff.

Chelmsford.—56 houses in Tennyson-road, for the T.C.:—

Long & Whatling, Ipswich	£21,170
Lawes, Cherry & Co., Ltd., London	20,692
J. Byrom, Ltd., London, Bury & Chelmsford	20,580
J. H. Thompson & Sons, Ltd., Grimsby	19,820
E. V. Barber, Ipswich	19,766
G. J. Hawkes & Sons, Chelmsford ...	19,600
S. E. Moss, Chelmsford	19,516
A. Holmes, Chelmsford	18,662
F. H. Stewart, Little Waltham	18,442
Sir W. Prescott & Co., Ltd., Aldwych	18,020
Bennett Bros., Letchworth	17,764
F. R. Absalom, Ltd., Cambridge ...	17,694
*Pearson & Blackwell (Doncaster), Ltd., Doncaster	17,168

Chelmsford.—32 houses at Writtle, for the R.D.C.:—
*F. J. & A. A. Lowe £10,778 3

Epsom.—10 houses at Little Bookham, for the R.D.C.:—
*W. J. Drowley £4,143

Fermanagh.—Bridge and bank to Galoon, with other collateral works, over a branch of Lough Erne, about 2½ miles south-west of Newtownbutler, for the C.C. Mr. J. P. Burkitt, County Surveyor, Enniskillen:—

Grainger Bros., Holywood	£8,625 8 0
Courtney & Co., Belfast	7,986 0 0
S. R. Boyd, Belfast	6,875 4 0
R. Colhoun, Derry	6,286 14 2
Capt. R. Pollock, Bangor	6,133 0 0
*R. R. Faris, Armagh	5,895 19 0

Galway.—Disinfecting station at Galway Docks, for the U.D.C. Mr. Binne, engineer:—

H. F. McNally	£2,639
M. Feeney	1,500
T. Emerson	1,500
W. Simon	1,445
W. O'Flaherty	1,496

The estimate of the Engineer, £2,384 10s.

Glasgow.—Convenience at Hamilton-drive, for the T.C.:—
*R. Murdoch & Son, Glasgow £1,000

Hornsey.—Reconstruction of the superstructure and widening of bridge No. 2, carrying road over railway at Muswell-hill, for the T.C. Mr. C. J. Brown, engineer, King's Cross Station, N.1:—
*J. Moffat, London.

Larne.—2 houses in Ballysnodd:—

Thomas Wilson	£530
Alex. Hill	480
*Nathaniel M'Dowell	472

(All of Larne.)

Leeds.—Concrete rafts, foundations, intake tanks and ducts at Kirkstall Power Station, for the T.C.:—
*H. Arnold & Sons, Ltd. £42,103 12 6

Leeds.—Erection of dwarf wall and fixing of wrought iron fencing at Headingley Filter Beds, for the T.C.:—
*Cripwell & Shaw £573

Leeds.—Painting houses, for the T.C.:—

*J. R. Hurdus, Meanwood estate (34)	£111 7
*Jesson & Robson, Meanwood estate (34)	101 3
*W. Noddings, Meanwood estate (70)	220 10
*J. Cass, Cross Gates estate (68).....	201 9
*C. & L. Greenwood, Middleton estate (68)	212 10
*Jackson & Singleton, Middleton estate (35)	115 0
*W. Noddings, Middleton estate (34)	107 10

Leeds.—Painting work at Killingbeck Sanatorium for the T.C.:—
*H. Shann £138

Leeds.—Extensions at the Stourton Printing Works, for Messrs. Waddington & Sons, Ltd. Mr. W. P. Peters, architect:—
*A. Hanks.

Leeds.—Painting work at the Seacroft Hospital, for the T.C.:—
*H. Shann £733 10

Leeds.—Wrought iron fencing for Headingley Filter Beds, for the T.C.:—
*W. A. Parker & Co. £245

Leeds.—Houses, for T.C.:—

*W. Thompson & Sons, 40 type A.3 and 10 type B.3 houses on the Meanwood housing estate	£17,961
*Paul Rhodes, Ltd., 12 type A.2 and 12 type A.3 cottage flats and 26 type A.2 and 36 type A.3 houses on the York Road and Selby Road housing estate	27,495

Leeds.—Painting various buildings, etc., for the T.C.:—

*Jackson & Singleton, Hunslet Cemetery	£82 9 0
*Armitage & Son, Bramley, Rodley and Stanningley recreation ground, New Wortley recreation ground and Western Flatts, Armley Park, ...	243 9 6
*J. Cass, Leeds Cemetery	150 0 0
*L. E. Wilkinson, Canal-gardens, Roundhay	188 18 6

Leeds.—Painting work at Meanwood Park Colony, for the T.C.:—
*S. Armitage & Son £383 14 10

Leeds.—Banking premises in Otley-road, Headingley, for the Yorkshire Penny Bank, Ltd. Messrs Chorley, Gribbon & Foggitt, architects:—
*Armitage & Hodgson, Ltd.

Leeds.—Conversion of St. Albans Vicarage at York-road into hotel, for the Leeds and Wakefield Brewery Co., Ltd. Messrs. Garside & Pennington, architects, Ropergate, Pontefract:—
*Matthews & Sons.

Lichfield.—16 non-parlour type houses on the Dimbles-lane site, for the T.C. Mr. N. Auty, City Surveyor:—
*J. Hudson, Armitage £6,196

Liverpool.—Four new filter beds, at Oswestry, for the Water Committee:—
‡A. Monk & Co., Ltd., Irlam £43,104

Lytham St. Annes.—Construction of an overflow weir, screen house and chamber, etc., together with about 240 yards of 36 inch concrete tubes, a manhole, and about 54 yards of 36 inch cast-iron pipes, for the Corporation:—
*W. Gresham, Lytham St. Annes.

Maldon.—8 houses at Tolleshunt Knights, for the R.D.C.:—
*T. H. R. Belchem £2,936 4 9

Mansfield.—Improvements and extensions to the Newstead Council school, for the Nottinghamshire E.C. Mr. L. Maggs, F.R.I.B.A., Shire Hall:—
*H. James, Mansfield £5,549

Mansfield.—Sub-station in Westfield-lane, for the T.C.:—
*Greenwood, Mansfield £167

Market Harborough.—Recasting houses at Saddington, for the R.D.C.:—
*— Jarvis £119 12 6

Mayo.—Extensions to the chapel, for the Mayo County Health Board:—
*J. P. M'Cormick £225

Middlesbrough.—Garage in North Ormsby-road. Messrs. Graham & Cumming, architects, Grange-road:—
*R. Henderson, Middlesbrough.

Monaghan.—Painting the hospital, for the Monaghan Co. Health Board:—
*T. Wilkinson £105

Newport (Mon.).—Station buildings on the down side at Newport (High-street) station, for the G.W.R.:—
*E. Turner & Sons, Cardiff.

Northam.—First portion of the scheme of sea defences at Westward Ho, for the U.D.C.:—
*H. Worth, Plymouth £4,269 16 0

Nottingham.—New Beckett Hut and Improvements at the Newstead Council school, for the E.C.:—
*H. James, jun., Mansfield £5,549

Portsmouth.—Additions to 37, Palmerston-road, Southsea, for Messrs. Gieves, Ltd., Old Bond-street, W. Mr. Harold Cox, architect and engineer, High-street, Camberley, Surrey:—
*John Lay & Co., Portsmouth.

Plymouth.—Completion of bus garage, for the C.B.:—
*A. & J. Mann & Co. £902

Plymouth.—Repairs to premises, for the C.B.:—
*W. Richardson, 130, King-street ... £190 0 0
*E. Porter, 73, High-street 322 17 6

Pudsey.—100 houses on the Waterloo housing estate, for the T.C.:—
*Wm. Thompson & Sons, Ltd., Leeds (90).
*W. Dunk & Sons, Barnsley (10).

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Rainham.—5 houses at the Sewage Disposal Works, Motney Hill, for the Rochester and Chatham Joint Sewerage Board. Mr. R. L. Honey, architect, Town Hall, Chatham:—

*W. T. Davis & Son, Chatham.

Ringmer (Sussex).—Residence on the Shepherds Mead estate, for Mr. C. Painter:—

*Ringmer Building Works.

Salford.—Maternity and Child Welfare Centre in Ordsall, for the City Council:—

*Moston Brick & Building Co., Ltd. Manchester £2,837

South Shields.—Alterations to fire station, for the Corporation:—

*J. D. Richardson £850

Stalybridge.—Extensions to the stores in Grosvenor-street, for the Stalybridge Co-operative Society, Ltd.:—

*W. Storrs & Sons, Ltd., Stalybridge.

Stirling.—Houses at Dennyloanhead, for the Central District Committee of the Stirling C.C.:—

*D. Stewart, Ltd., Bonnybridge.

Stoke-on-Trent.—Extensions to the Abbey Hulton Council school, for the E.C.:—

*Palin Brothers, Tunstall £1,815 12 6

Sunderland.—Factory in Villers-street. Mr. M. K. Glass, architect, Saville-row:—

*R. Stafford, Sunderland.

Steelwork—

*McIntosh, Hay & Co., Newcastle-on-Tyne.

Stonework—

*J. Lant, Newcastle-on-Tyne.

Termonfeckin.—Dispensary, for the Louth Health Board. Mr. Turley, architect:—

Peter M'Cann, Drogheda	£314 0 0
Murphy Brothers, Termonfeckin...	257 0 0
Francis Carroll, Cartown	245 0 0
*Patrick Byrne, Dillonstown	234 18 4

Thorne.—New Club and Institute for the Thorne Colliery Club. Messrs. Cayley & Jarvis, A.R.I.B.A., architects, Darlington:—

House Builders' Association, Ltd. London	£9,103 11 4
W. Birch & Sons, York	8,790 0 0
Johnson & Moore, Doncaster ...	8,700 0 0
R. Thompson, Thorne	8,573 13 6
Swift Bros. & Haslam, Doncaster	8,547 5 9
Pearson & Blackwell, Doncaster	8,489 0 0
Leadley, Firth & Whittington, Doncaster	8,412 4 6
T. Bull & Sons, Doncaster	8,393 0 0
B. Groves, Goldthorpe, nr. Rotherham	8,350 0 0
‡T. Jenkinson & Sons, Doncaster	8,198 5 2

Waterford.—Improvements in the institution, including central heating and hot-water systems, for the Mental Hospital Committee:—

*Haden's Engineering Co., Ltd., Dublin £6,525

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